Food and Freedom

Mabel Dulon Purdy

FOOD AND FREEDOM.

THE MAID OF ORLEANS—AN ANCIENT AND A MODERN IDEAL

From the clay model by Anna Vaughan Hyatt, before the statue was cast in bronze and erected on Riverside Drive

FOOD AND FREEDOM

A Household Book

BY

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ILLUSTRATED

ENDORSED BY

THE U. S. FOOD ADMINISTRATION

HARPER & BROTHERS PUBLISHERS

NEW YORK AND LONDON

FOOD AND FREEDOM

Printed in the United States of America
Published May, 1918

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To
All Women
who have already given help
and
All Women
who may still need help
This Book
is thankfully and hopefully
dedicated by the Author

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PREFACE

U. S. Food Administration,
WASHINGTON, D. C.

THE women of the country have accepted the burden that the Food Administration and the President himself have thrust upon them. They have assumed responsibility for the saving of food, for its right use, for its proper preparation. They realize that the situation has become critical; that there is not enough food in Europe; that the soldiers of the Allies must be maintained in full strength, and their wives and children at home must not face famine; that the friendly neutrals must not be starved; and that our own army in France must never lack a needed ounce of food. They are willing to do their utmost; but to do means not only resolution, it means knowledge.

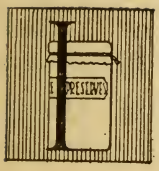
Such books as *Food and Freedom* are invaluable in helping the housekeeper understand just what she ought to do, in pointing out to her the way, and in putting her in touch with the sources of scientific information that will aid her in her

task of changing the food habits of a nation. She must be trained to meet new needs and new conditions in order to do her share in this great upheaval. "Twentieth-century ideals" and "modern possibilities" are no less important in enabling her to face the hard facts of to-day than are the older-fashioned household achievements. This book will help her to organize her duties and to bring freedom into work that has often been a symbol of bondage.

UNITED STATES FOOD ADMINISTRATION.

March 7, 1918.

INTRODUCTION



IN spite of its cruelty, largely because of that, the Great War has taught us many useful lessons. Perhaps the greatest of these is the importance of food education and the general need of food knowledge in the homes of America. Since 1914 these homes have received a great jolt and an awakening; instead of the former common, indifferent ignorance on all matters dealing with food and diet, we now find the new why and how of scientific feeding rapidly becoming a vital factor in the daily calculations of all who are trying to wrest the best kind of a living from their particular world.

The purpose of this book is to present, in compact form, to the housekeeper who may need the special, organized food and household knowledge now demanded of her as a patriotic duty such simple, prime facts as can give her immediate assistance with definite, practical results. At the same time it is also the purpose of the book, through the credit notes and references pains-

takingly assembled, to serve as a guide in acquiring further detailed knowledge from that great wealth of material to be found in the perfect food and home-making literature already published. There is no ambition represented in the pages that follow other than the one hope of possibly making housekeeping as a whole, with emphasis on wise family feeding, easier and happier for a few women, with better national results, at a time when the giving of any help in this line is also a patriotic duty.

The material covered includes those important facts in the science of nutrition a clear understanding of which is now required as a necessary background for proper feeding in normal, everyday living, followed by practical suggestions for planning, cooking, and serving meals in the simplest, happiest way, and supplemented by a chapter of selected and tested recipes. The changed conditions of living naturally brought about by progress, with new ideals, new needs, new responsibilities, new benefits—all emphasized by the Great War—are touched on, and a special appeal made for household system, thrift, and food conservation as a basis of national strength and prosperity. This material is built up on years of scientific study, teaching, and practical experience, including particular research work in the recent advances made in scientific feeding and organized living.

It has all, moreover, been carefully checked with the latest scientific conclusions of those accepted authorities in the food and household world whose records have earned for them the right to really know.

The author acknowledges with gratitude and full credit the help and inspiration received from those who have already written on similar subjects, from the work of the United States Food Administration and the Department of Agriculture, and from the very practical support of the editorial staff of the McClure Publications. The careful reading of the manuscript by Miss Gertrude B. Lane, the valuable criticisms given by Dr. Carl L. Alsberg, chief of the Bureau of Chemistry, of the United States Department of Agriculture, in connection with the chapters on nutrition, and the interested artistic assistance of Mr. Herbert Baer, in connection with the planning and drawing of details for a helpful and attractive kitchen, are specially acknowledged and appreciated.

FOOD AND FREEDOM

JOAN OF ARC NEVER DIES

"While it was France whom she served, her influence and lessons are not limited to France. Though she is separated from us by five centuries, and distant some four thousand miles across the sea, though entirely isolated in experience, it is fitting that America has erected a statue in her honor." If this is so, is it not still more fitting that at this critical time in our history, as well as in the years of reconstruction that must surely follow, she serve as an exponent of what faith and will can accomplish? What one frail woman did because she "believed" others can do also—it matters not what the purpose or ultimate aim may be. Jeanne d'Arc fought for her country and the homes of France; we are fighting for our country and the homes of America—not only to save them at this moment, but to save them for the bigger, happier civilization that must come!

FOOD AND FREEDOM

I

OUR EMERGENCY

Every housewife who practises strict economy puts herself in the ranks of those who serve the nation. This is the time for America to correct her unpardonable fault of wastefulness and extravagance. Let every man and every woman assume the duty of careful, provident use and expenditure as a public duty, as a dictate of patriotism which no one can now expect ever to be excused or forgiven for ignoring.—PRESIDENT WILSON.

OT only because of the ravages of war, but through many ironies of fate, the world is short of food—really facing food exhaustion. Those who have followed the history of the Great War know that some satisfactory solution of the world's food and feeding problem, in its three great, entangled phases—production, control, conservation—is the trembling issue on which all the hopes of liberty

and extended democracy for the world now rests. It is only the combined force of every individual will in an unromantic army of food producers, controllers, and conservers that can mend our broken world and hopefully restore it to a higher plane of civilized order than it ever held before, for—and with apologies to the great Russian banker—*food*, that is the future of freedom and peace!

Previous to the outbreak of the Great War, food thrift, recognized as a national asset, had been more or less consistently practised in Europe, particularly, perhaps, in Germany, France, and Italy. Intensive production and elimination of household food waste had been reduced to a science and almost raised to a fetish. In spite of this fact, however, the master importance of food, in the event of war, was not completely realized—even by otherwise thoroughly prepared Germany. Man-power, arms, strategy, and gold have always been the factors emphasized and counting in the history of past wars. No sooner had the titanic storm broken in the summer of 1914, however, when the quick and full realization that food plenty or lacking would win or lose the war came home to the fighting nations like a knife-thrust, and the accommodating storehouse doors of America were well-nigh battered down. And then America, too, perhaps for the

first time in many years of a spendthrift existence began to think.

Although the United States produces more food than any other country in the world,[1] for a period covering, approximately, twenty years preceding the outbreak of the war food production in the United States did not entirely keep up with the increase in population; in the more important staple products—wheat, meats, milk, and allied foods—statistics prove a definite decline.[2] At the same time the United States has always been looked upon as an ever reliable source of food for many of the nations of Europe. England, France, Holland, Belgium, Italy, Germany had been in the habit of coming to us for food which they needed in excess of that which they were able to produce in their more limited territory. This demand was made largely against grain foods, fats, meat, and, to an extent, sugar.

For a corresponding period, due to the normal shifting and evolution of economic conditions—which are all growing-pains, as it were, of progress and development—there was a definite and serious rise in the United States in the price of all foodstuffs, and making the ends of the household food budget meet has been an increasingly dif-

[1] See Kellogg and Taylor, *The Food Problem*, chap. i, p. 9.

[2] *Cf.* Report from United States Department of Agriculture, December, 1916.

ficult task for the American housekeeper. To complicate conditions further, we have been content to go our way commonly without knowledge on the entire question of food materials, nutritive values, economical living, marketing. We have even been charged, and to an extent rightly, with a very general national lack of thrift, with over-consumption, with shameful waste and extravagant tastes in our methods of living.[1]

With the exception of the United States, the present food shortage is almost universal, to some extent, and in the staple products—grains, meat, dairy products, fats, sugar—at least. In the countries which have been passing through the cruelest realities of the war the food-supply is particularly low. Even our own fortunate surplus is not over-bountiful. To control, order, and fairly divide that which our vaster acreage can be made to produce with those who have less and need help, and to do this without sacrificing the health or definite daily needs of our own people, or entirely destroying the normal balance of food conditions in our own country, is our big problem at the moment.

In other words, America must to-day not only feed her own people, but she must feed to a very appreciable extent the peoples of Europe, and

[1] *Cf.* Reports from United States Department of Agriculture for the year 1917.

this must now be done not under the care-free conditions that prevailed before the war, but in the face of many disadvantages and with the closest kind of calculation. With a food-supply scarcely keeping pace with our growing population, we must give more than we ever gave when the years were full. Out of our own none too generous store, already sorely depleted by over-exportation, with little help from distant points, we must pay the tax and toll of war on the world's supply of food. And how shall this be done? The possible solution lies, as we know if we have learned our lesson, in increased and more stabilized production of food in the country as a whole, in the wise regulation and control of that food produced, and in the most intelligent use and conservation of every bit of food available.

Onto the shoulders of the American farmer and the American housekeeper has the weight of the burden of this enormous duty of ours been thrust. The farmer must produce the needed increase in the food-supply, he must get the best and the most out of every acre of soil he tills; the housekeeper is the final partitioner of the food available; she must get the best and the most—both for our own people and those dependent on us—out of that food which is produced. She must make it go just as far as she possibly can, with the very best results in individual and national health and food

satisfaction. The situation finds the farmer, both in technical knowledge and organized effort, and with the many practical mechanical devices now manufactured for improving agriculture, more or less prepared. But the housekeeper's task is not so simple. Before she can get the best or the most out of the food which the farmer can give her, she has yet to learn not only how to get it and how to stretch it, but, first of all, what the best and the most may be.

Unfortunately, of what we have been accused is in many respects too true—the people of America are commonly without scientific and practical knowledge on the entire question of food and wise and economical family feeding, while 30 per cent., it has been estimated, are guilty of extravagant living and the use of more food than is normally necessary. "The food waste in the household, the experts assert, results in large measure from bad preparation and bad cooking, from improper care and handling, and in well-to-do families from serving an undue number of courses and an overabundant supply, and failing to save and utilize the food not consumed. As an instance of improper handling, it is discovered that in the preparation of potatoes 20 per cent. of the edible portion in many cases is discarded." [1]

[1] Report of the Secretary, United States Department of Agriculture, March, 1917.

Lack of food knowledge, combined with lack of organization and food thrift in the home, and its attendant waste, and the effect of this on the homes of America, our country as a whole, and the complex relationship now existing between our own food problem and the food problem of the world—this is in reality our biggest emergency. It must be faced with an open mind, with clear thinking and definite action. It can only be remedied by the will to remedy it, and the method is the wisest kind of food administration in its biggest and broadest sense, based on the soundest kind of food and home-making knowledge and its practice. If, as Herbert Hoover has told us, the ultimate success of food administration really rests upon the "intelligent management of the American housewives in our twenty-two million homes," and that, after all, "only the guiding hand of woman can control," the position that the American woman now holds in the life of the world, the freedom and strength of our own country, and the happiness and efficiency of the American home is, indeed, a strategic one.

II

WHAT YOU CAN DO

You are a great army drafted by conscience into what is now the most urgent activity—that of increasing and conserving the food-supply.—HERBERT HOOVER.

HEN the fighting nations of Europe felt the actual possibilities of famine, when they realized that the food-supply was decreasing as their food needs increased, they immediately turned their attention to some effective form of food control—involving increased production, fair division, and practical diet regulations. In Italy, France, and England—although decided central measures in connection with the certain staple foods and the fixing of prices developed as conditions grew more serious—the cry for help through government food control came from the people, and the real strength of the measures adopted lay in the "voluntary co-operation of the households." In relentless Germany, almost entirely cut off from any outside food help, government food-control

was forced on the people and household co-operation required by law." [1] "Russia, with perhaps the greatest possibilities of food production in Europe, did nothing at all, and out of Russia's food situation grew her revolution." [2]

When America's crisis came, in April, 1917, the United States had the mistakes and successes of Europe to profit by, and the opportunity to fully realize that a sane and effective system of food control and national strength went hand in hand. On June 10, 1917, two months after war had been declared, a food-control bill was introduced, and Herbert Hoover—with the help of an enthusiastic body of volunteer workers—became, although unofficially at first, our food adviser and protector. Just two months later the food bill was passed, and Mr. Hoover was then officially appointed as our Food Administrator, and through him a Food Administration Board established.

The story of Mr. Hoover, his remarkable ability for organization, combined with a rare and generous sympathy and an almost superhuman faculty for concentration, is well known to the world to-day. As a food administrator, Herbert Hoover won his spurs in innocent, war-startled

[1] Kellogg and Taylor, *The Food Problem*, chaps. ii, iii, iv.

[2] "What Food Control Really Means," special paper, United States Food Administration.

Belgium, where through his genius alone millions of destitute, starving men, women, children, babies, were fed and clothed and soothed and encouraged. For almost three years Hoover stood his ground —facing kings and diplomats, human charity and tyrants, and getting the help he needed— when our own America was threatened. President Wilson called Mr. Hoover home. He came, he grasped our condition, our infinite possibilities, our power for good if our wealth, particularly that of food, could be controlled, ordered, and fairly divided. And then he set to work.

As a result, the best minds and hearts in America are now striving to master the food problem and the food responsibilities of our country, not only for the present, but with thought for the future as well. Every phase of the food problem is represented, from increased, improved, and more stabilized production, through packing, shipping, storing, marketing, preservation for future needs, down to the final use of food in the home and in public eating-places; nor is the education of the public in food conditions, food needs, and food possibilities overlooked.

The United States Food Administration stands for the food welfare of the United States and those dependent on us. The hopes of our Food Administration when established were threefold:

> First, to so guide the trade in the fundamental food commodities as to eliminate vicious speculation, extortion, and wasteful practices, and to stabilize prices in the essential staples; second, to guard our trade exports so that against the world's shortage we retain sufficient supplies for our own people, and to co-operate with the Allies to prevent inflation of prices; and, third, that we stimulate in every manner within our power the saving of our food in order that we may increase exports to our Allies to a point which will enable them to properly provision their armies, and to feed their people during the coming winter. The Food Administration is called into being to stabilize and not to disturb conditions, and to defend honest enterprise against illegitimate competition. It has been devised to correct the abnormalities and abuses that have crept into trade by reason of the world disturbance, and to restore business as far as may be to a reasonable basis.[1]

When organized, the Food Administration Office was "specifically charged with the duties of carrying out the mandates of Congress in regulating supplies and managing a national campaign of food-saving." [2] Covering the three great activities—*Production*, *Control*, and *Conservation*—its business includes four divisions: Control of exports; trade regulations to the exclusion of both

[1] From a statement to President Wilson made by Herbert Hoover, after his appointment on August 10, 1917.

[2] "Ten Lessons on Food Conservation," Bulletin, United States Food Administration.

legitimate or illegitimate speculations; the establishment of state administration boards to co-operate with the central board; the mobilization of men and women all over the country to carry out the directions for food conservation.[1]

> The Food Law authorizes a governmental control over the supply, distribution, and movement of all food, feeds, and fuel, and all machinery, implements, and equipment required for their actual production. Any agency necessary to carry out their control may be created; any existing department of the government may be used. All destruction of food and fuel for the purpose of enhancing prices is prohibited; all wilful waste, all hoarding, all monopolization, all discrimination and unfair practices, all unjust charges in handling and dealing in food and fuel, and all combining to restrict production supply, or distribution are made unlawful.[2]

Although the Food Law authorizes very far-reaching powers, the Food Administration believes that "co-operation is better than law in making the countless complex changes in industry and trade necessary for orderly food control." [3] Quoting from Mr. Hoover again, our food problem is not considered from the viewpoint of force

[1] "Ten Lessons on Food Conservation," Bulletin, United States Food Administration.

[2] *The Food Problem*, Kellogg and Taylor, p. 21.

[3] "The World on Rations," Special Paper, United States Food Administration.

—"always from the viewpoint of voluntary effort." [1] Every one is asked to enter the fold as a volunteer worker, and the heart-and-soul answers that have come to this patriotic call, the enthusiasm and conscientiousness with which special appeals for food-sparing or food use have been met and kept, prove that we have ground for the greatest faith in our democracy and continued and extended liberty.

Although created purely as a war-emergency measure, it is now believed that, even had not the war come home to us directly, food control in some form would have been called for by the people, for food conditions had reached a climax where some action for the welfare of the country was urgently required. If this is so, shall we not hope then that some sane form of food administration may become a permanent factor in our government? Whether for war or for peace, however, with every aim, phase, and division of our present or any similar government food organization in Washington, every kitchen in every state in the United States is definitely and intimately connected. The vibrations of every daily food need or demand of the people are recorded in the office of the Food Administration, and it is the housekeeper, better than any one else, who,

[1] "Food Armies of Liberty," Herbert Hoover, *National Geographic Magazine*, September, 1917.

in the understanding and ability with which she regulates her home, can wisely control and rightly direct these food needs and wants. Just to the extent that she plans her meals, buys her food, cooks, serves, and saves intelligently or not does she register as a helper or a drag in the work of strengthening the food situation of the country. Twenty-two million homes, twenty-two million housekeepers, organized and understanding, are a power that must be reckoned with. The national food problem cannot be separated from the home food problem, and just to the extent that the food problem is placed on a sounder footing in the homes in the United States will the United States and the other nations of the world benefit accordingly.

Then the question comes, What definite steps can the housekeepers of America take in order to help in this new and important work of food administration? How shall each individual housekeeper prepare herself to meet the burdens now so insistently pressed upon her, and through that preparation count as an active force in bettering food conditions the world over? In partial answer, the following summary suggests itself:

WHAT YOU CAN DO

1. **Help to Produce More Food:**

   By recognizing the rights of the farmer to a just profit and a free market.

By cultivating and planting and cherishing every available acre, lot, garden spot, or yard to help feed your family, for the present, at least.

By using the foods urged by the government; by sparing the foods we are asked to spare.

2. Help to Regulate Food Distribution:

By assisting the Food Administration and the United States Department of Agriculture at Washington, through your home state and town to keep the country's food-supply inventoried. How much available food is on hand, where it is, to whom it belongs, how it may best be marketed, what the crop and other food prospects are in different localities, or what special food difficulties may prevail, are matters that concern us all.

By fighting all wrong food control or other unwise or unfair handling or manipulations that may artificially cut off the supply and increase prices.

3. Help to Conserve Food:

By studying organized and economical living, food values, scientific feeding, proper cooking. Get in touch with the United States Food Administration Board, the United States Department of Agriculture, or with your state college of agriculture, and take advantage of all the available free information that is printed and so generously distributed by

these agencies. Take every opportunity that may come to you, or, better, create the opportunity, to become acquainted with authentic food facts. Study reliable books, bulletins, and magazine articles on the subject of food and housekeeping. Learn to plan meals, buy, cook, and serve without waste.

By serving and eating only what is needed; let that be enough, however, to maintain health and the full working efficiency of the body.

By eliminating all wasteful methods of living, false standards, and household food waste.

By properly preserving and storing food, when advisable and practical, against future need.

If, in our efforts along these lines, we shall ultimately succeed in establishing a closer union between the government and the people than our political history has ever recorded, in acquiring that scientific knowledge of foodstuffs now recognized as so vital, in improving food distribution and marketing conditions so that our vast possibilities in food production can materialize and become available without waste and undue cost, and in so organizing our daily living that the sum total of drudgery and friction is lessened, we shall perform a service to this country far greater than we can perhaps visualize at once. To consum-

mate such a service, however—although we have been placing the burden of our troubles on the American housekeeper—the unselfish co-operation of all interests in the country—individual, business, professional, political—is required. Are we ready to give "for our flag and for our freedom" and for our homes, now and for all time, that co-operation?

"It will not be a creed, but a crusade, that will unite Christendom" and save democracy the spirit of the present adds. Those who have their fingers on the pulse of the world will tell you that our crusade has come. And the specific nature of that crusade—so far as America, at least, is concerned—must be a crusade for carrying food knowledge and a deeper appreciation of the far-reaching value of that knowledge, properly understood and applied, into every home in this great country. For the waste and the fire which have bled and scorched our world we must at least in one particular show gratitude. What the American women have not known about the dull routine of food and feeding, the great conflict has disclosed; what power for good lies in the light now shed on that routine it has brought forth.

> As sisters, as wives, as mothers, as friends, as helpers to all that is noble, you, the educated women of this generation, have a responsibility and an influence that should make you at once

happy and grave—happy, because of the limitless power for good that comes of doing day by day what must be done, and of seeing, even in the drudgery of it, "a light that never was on sea nor land"; grave, lest in times of human weakness you may turn from the light and may see only a sad and dull routine in a world of darkness and sorrow. In these hours which may be only the reactionary consequence of the best work you have ever done—the nervous depression that follows nervous exaltation—learn to say with the old philosopher, "This, too, shall pass," and learn to look, even at your own weariness, with the eyes of a poet. For I still believe that, though few women have been great poets, it is part of a woman's mission to put poetry into life . . . not to scorn the cabbage, but to invest it with a rose motive, to see the light that kindles the commonplace into everlasting truth.[1]

REFERENCES AND CREDIT NOTE:

The food facts as outlined in Chapters I and II have been arranged from the following authoritative sources; full credit is given. For further and more detailed knowledge, these publications are earnestly recommended:

The Food Problem, Kellogg and Taylor, Macmillan Company, New York, N. Y.

"Ten Lessons in Food Conservation," United States Food Administration, Special Bulletin.

Bulletin No. 6, United States Food Administration.

[1] Le Baron Russell Briggs, Harvard University.

"What Food Control Means," United States Food Administration, Special Paper.

"The World on Rations," United States Food Administration, Special Paper.

Annual Report, Secretary Houston, United States Department of Agriculture, December, 1916.

"The Food Situation," Secretary Houston, United States Department of Agriculture, March, 1917.

"Food Armies of Liberty," Herbert Hoover, *National Geographic Magazine,* September, 1917.

III

WHAT WE SHOULD KNOW

The new democracy holds the near solution of domestic drudgery. . . . To have only beautiful things and artistic devices in our homes in order to produce a simplicity *de luxe* would be to emancipate many women and cheer many men. The new home will be a well-organized and beautiful expression of a new life in which men and women together will gradually make disorder, dirt, and extravagance conspicuous by their absence.—Mrs. Havelock Ellis, in *The Craftsman Magazine*, July, 1914.

IF we, the housekeepers of America, are effectively to answer this call to serve the world, if we are to satisfy our obligation in the present emergency, if we are to build better for the future than we have built in the past, there are certain fundamental facts in connection with home-making with which we should be familiar. We should, moreover, be able to trace these facts in their logical significance, and appreciate them in their relative importance. These facts clearly grasped, once

sensed in some orderly fashion, should form a helpful background on which to shape our service. When ordered, they read somewhat as follows:

The home is the birthplace of every human impulse.[1] It represents the unit of the state, and has very fittingly been called the index of civilization. What happens in the home shapes the world beyond.

Home-making deals essentially with the material protection and spiritual advancement of the family or those who make up the home.

Ideal home-making requires the combined, organized effort and unselfish devotion of both a man and a woman; it includes such feeding, clothing, shelter as well as moral, mental, and social education for each member of the family as shall enable each to get the best and the most out of life by giving the best and the most to life.

On the material side, the man's part has dealt primarily with providing shelter and acquiring such raw materials as might be converted into suitable food, clothing, and furnishing. Woman's part has dealt primarily with the conversion of these raw materials into their most useful form.

With progress and development, the type of raw material, the method of acquiring it, and the

[1] Helen Campbell, *Household Economics*, chap. i, p. 18.

means of converting it into the desired end have changed from time to time.

With progress, also, man's efforts and services have become definitely organized and are now recognized, valued, and paid for on some exact basis of calculation; they are commonly called wage-earning. Woman's efforts and services have remained unorganized, have not been definitely recognized, and have been accepted without being fully valued; they are commonly called housekeeping.

To-day, man brings money to the home rather than raw materials, while it is largely a woman's work to use this money to the best possible advantage—for the individual, the home, and the nation. This means *wise spending* for both raw materials and finished products, as well as *wise utilization* of all materials and products purchased.

This twofold effort is not entirely simple, however. It requires some knowledge of values, with the power to choose wisely; some knowledge of production, with the ability to do and make things well; some appreciation of the relation of the home to outside production and distribution, with judgment to rightly direct and wisely control home demands. All this, in turn, requires trained intelligence, skill, energy, time. In addition, the growing and rightful desire of all women for freedom and self-development, for recognition of their services, for a "paid job" of their own, has added other

complications. Moreover, the old habit of lack of organized effort has persisted, and confusion and waste in the home have followed.

To-day, with fewer things to do in the home than formerly, with means to make more simple those things that remain to be done, with a broader, freer, sweeter individual life within our reach, home-making has become the unsolved problem that we find it, and our homes are suffering, and the world beyond is feeling it.

From its very nature, and its very necessity, and its unyielding effect on the development of the individual, that part of housekeeping dealing with food and feeding is the most complicated, is most far-reaching in its influence, and requires the most readjustment. As housekeepers, we have neither spent our food money nor utilized our food materials to the best advantage; we have not entirely kept pace with new conditions and new needs; we have not mastered the new knowledge required. As a result, we stand unprepared, as a body, to meet wisely and efficiently our share of the great world food and feeding problem suddenly thrust upon us, to feed not only ourselves, but those who are dependent upon us, to save our homes for that bigger, freer living that must come. We need home help, ourselves, before we can give the national and world help asked of us.

How can this help be obtained? There is only one real way. It can only be obtained through

organization in the home and education on the part of those who keep the home.[1]

The point has now been reached where order must be introduced into our scheme of home-making and a fresh start made. The idea of establishing a home on saner standards, and conducting it on business principles, must be commonly accepted by the world. Women's end, specifically, must be organized, recognized, and given a money value. Housekeeping must be lifted from its daily, ceaseless, careless grind and faced and conquered and paid for, just as any other worth while work is faced and conquered and paid for. The home to-day must meet the conditions of to-day. The necessary, practical steps in order to bring this about include:

1. **Organization of home-making and housekeeping as a whole:**

   By recognizing the money value of household work, and crediting this as a definite part of the annual income.

   By planning an annual budget, based on this total income, and living up to this budget as conscientiously as possible.

[1] There are those, however, who believe that help must come by taking the food problem out of the home entirely. While economy in materials, money, time, and labor would unquestionably result, is this the only end in home-making, is it the only basis on which national prosperity must be founded? Would economy so effected be of value to the world?

By securing "household help" through simplified living, efficient working conditions in the home, and, where further help may be required and can be afforded, through professional help based on an eight-hour day.

2. **Specialized education and technical training in the science of home-making and housekeeping, particularly in that part of housekeeping dealing with food and family feeding.**

For the two people who constitute the important members of the home partnership—the man and the woman—there are, in reality, exactly the same problems to be faced as there are by any individual, firm, or corporation that is about to engage in any productive and hopefully profitable enterprise in the business world. In order that the home-making problem can be squarely and fairly met, with profitable returns for both partners, the following points should be squarely and fairly faced before the start is made:

The capital on hand.

The annual income, estimated both in money earned and household service given.

The special needs of the particular home under consideration, with provision for its development and protection for the future.

In other words, one should take stock, as it were, of all assets and liabilities, invest the available

capital wisely in the desired home plant and its necessary equipment, plan a well-balanced budget, dividing the total annual income to the very best advantage, and never once lose sight of the fact that each new year should see the proposed "business" farther along the road in mutual happiness and wealth, always an asset to the community. This is a large order, possibly, but, with determination and the right method of approach, it can usually be filled.

With the available capital once properly invested in a suitable house, the next important move is to work out the best possible division of the regular income to cover expenditures for a certain interval. This division of income is spoken of as the "family budget." Clearly defined, "a budget is a detailed plan of anticipated income and expenditure for some definite future period of time, as a week, or month, or year; it is intended to control expenditures during that period." [1]

A well-arranged budget includes five main items: food, home, clothing, running expenses, and personal development, with provision for the future—these items to be considered in the order given. Under normal conditions of living, expenditures for these items, in incomes ranging

[1] Benjamin R. Andrews, Ph.D., *A Survey of Your Household Finances.*

from two thousand to four thousand dollars, for an average family of three to five persons, have been planned on a more or less definite percentage basis, approximately as follows: [1]

Food	30	per cent.
Rent, or interest on home	20	"
Clothing	15	"
Running expenses	15	"
Advancement, education, savings	20	"

To what extent the percentage expenditures suggested can be followed will depend upon local conditions, the ages and needs of the various members of the family, and personal and social ambitions. An annual budget carefully planned, however, and put in effect on the first day of the home-making business year will more or less enable one to control expenditures in each department of living for that year. At least we can know within certain limitations what our expenditures are, and how we are prepared to meet them. With a budget well in hand, if it is not possible to make ends meet in one way, other methods will suggest themselves.

Of all the items covered in the family budget, however, that of food combined with operating expenses, or the cost of running the home—which includes fuel, light, help, upkeep—is the most

[1] *Cf.* Ellen H. Richards, *The Cost of Living*, chap. iii; also, John B. Leeds, *The Household Budget*, chap. vi.

variable and the most complicated. It is constantly affected by outside local and world conditions. It is, therefore, the most difficult to handle with the greatest consistent advantage to both the home and the country. Under the present disturbed conditions this is particularly true.

With this food and feeding problem of the average home intelligently mastered, however, housekeepers must agree that comparatively little now remains that is difficult in home-making. For the housekeeper of to-day who realizes the importance of this home problem, and appreciates its relation to the greater food and feeding problem of the world, and that both problems are her very definite personal responsibilities in the present crisis, there is but one way out. This way lies through a scientific knowledge of food values wisely interpreted and consistently and conscientiously applied according to the food needs of those for whom she is responsible. This is sometimes called scientific feeding. When it can be accomplished with little effort, without waste, and with the best and happiest results to all concerned for the money, time, and energy spent, it might be called good housekeeping.

The questions we should know how to answer in order to feed scientifically, or to be good housekeepers, as we may prefer to call it, include:

What food is.
Why food is needed.
What the different food elements are.
What each does for the body.
How much of each is needed.
What common foods best supply them.
What proportion and combinations are desirable.
What part cooking and serving play in the ultimate nutritive satisfaction food can give.

We should also know:

How to plan, buy, cook, serve, save to the best advantage for every interest affected—the individual, the home, our own country, those in other parts of the world now dependent upon us.

But, even fortified with this knowledge, the housekeeper cannot put it into practice entirely alone. In addition to her own efforts, she requires some practical help with the actual work connected with the cooking and serving of meals. If this help is not secured in some way, the housekeeper is overworked and her particular enterprise in home-making cannot be a success. Whether this needed help shall be hired labor or the establishment of labor-saving conditions in the home is one of the questions of the day.

Fortunately, perhaps, the question of personal help, in the usual unskilled way in which it has been accepted, is becoming a problem of the past. If one is big enough to look at it in a big way, surely this is all for the best. Varying statistics

have shown that formerly only from twelve to eight per cent. of the families in the United States attempted to keep "hired help." More recent figuring has brought the percentage down as low as six per cent. What difficulties face that remaining six per cent. most of us know, if not from actual experience, at least from what we are able to learn. Changes in our ideals of living, the rightful desire of all women to be free and independent human beings, the Great War, have all combined to bring about conditions that have almost cut off the source of supply of so-called hired help.

The truly business-like housekeeper of to-day must get and is getting the needed household help largely through labor-saving conditions in the home, including mechanical labor-saving devices. This seems not only the most reasonable procedure, but, cleverly worked out, gives the most satisfactory results for the money spent.[1] Where still more help may be needed or desired,

[1] The chart on page 252 in chap. xii will give one an approximate idea of how a sum of money set aside for help may be expended in securing such ideal working conditions that personal help need never be missed. Add to this sum the expense of feeding, also damage and uncertainty costs of unskilled labor, and a considerable amount of money would be in hand annually for converting into such home improvements as would not only give the needed help, but—since permanent equipment fairly represents capital invested—would automatically increase one's wealth.

the plan of employing specialized, professional service by the hour or day, based on the eight-hour labor law, is meeting with success. It is a plan which should have the support of every broad-minded man and woman in the country.

Although so many departments of our daily living are now increasingly provided for outside the home, this food and feeding problem, with its intricate complications, still remains. And it is a problem, apparently, that, for the best good to the greatest number, must be solved in the home.

Fortunately, food and household authorities have been devoting years of study to this very problem and have now sane standards and sound advice available to all who may wish to profit by them. If, in fitting ourselves with this new and necessary knowledge, now asked of us in the name of liberty for our country and democracy for the world, we honestly offer our best and most understanding effort, freedom for ourselves—that end which is the cause and hope of every woman movement on record—shall be our reward.

REFERENCES:

For help in organizing home-making and housekeeping the following publications are recommended:

Man and Woman, Havelock Ellis.
"The Economic Function of Woman," *Technical Edu-*

cation Bulletin, Edward T. Devine, Teachers College, New York, N. Y.

A History of the Family as a Social and Educational Institution, Willystine Goodsell.

Household Economics, Helen Campbell.

The Art of Right Living, Ellen H. Richards.

Progress in the Household, Lucy M. Salmon.

Woman and Labor, Olive Schreiner.

The Business of Being a Woman, Ida M. Tarbell.

Home Problems from a New Standpoint, Caroline L. Hunt.

"Saving Strength," by E. M. Bishop and Martha Van Rensselaer, Cornell Reading Course, Cornell University, Ithaca, N. Y.

The Woman Who Spends, Bertha J. Richardson.

The Cost of Living, Ellen H. Richards.

The Household Budget, John B. Leeds (published by John B. Leeds, Germantown, Philadelphia, Pa.).

"A Survey of Your Household Finances," *Technical Education Bulletin*, Benjamin R. Andrews, Ph.D., Teachers College, New York, N. Y.

Wanted—Young Woman to Help with Housework, C. Hélène Barker.

Journal of Home Economics, published monthly by the American Home Economics Association, Baltimore, Md.

NOTE.—This periodical, in addition to valuable articles covering every phase of the food and home-making problem, contains, each month, a bibliography of new publications and current periodical literature dealing with food and home economics. By following this bibliography it is possible to keep abreast of the times in the food and home-making world.

The Foundation of National Prosperity, Ely, Hess, Leith, and Carver.

NOTE.—This volume contains interesting chapters and paragraphs of definite value to the home-maker.

For additional help consult and keep in touch with the home economic publications and food bulletins issued by:

The State Agricultural Colleges.
The United States Department of Agriculture, Washington, D. C.
The United States Food Administration, Washington, D. C.
Woman's Committee, Council of National Defense, Washington, D. C.
The United States Bureau of Education, Department of the Interior, Washington, D. C.

NOTE.—*Education for the Home*, parts i, ii, iii, and iv, by Benjamin R. Andrews, Ph.D., published by the United States Bureau of Education, contains a very comprehensive survey of the whole subject of Home Economics, its development and progress, with a list of colleges and universities in the United States teaching Home Economics and related subjects; part iv contains a very complete list of references on Education for the Home, including standard books, periodicals, and syllabuses, with a list of cities and towns in the United States in which Home Economics or Household Arts is taught.

See also references listed in subsequent chapters, particularly Chapters VII, VIII, and XI.

IV

THE WORLD ON A DIET

But what of that, where, down the roll,
  Each has the chance to prove, at par,
The steel-shod manhood of his soul
  Against whatever odds there are;
The chance to suffer—and to grow—
  That some day, when the flags are furled,
The children of to-day may know
  A finer and a better world.
—GRANTLAND RICE, from "1918—The Soldier."

UT a ready, reasonable grasp of the food knowledge outlined, and its practical application to the life of the home, is not yet the end of our food problem. There is one more milestone to be reached and passed. And every law of self-preservation and humanity demands this final effort. All the food knowledge we can master must now be wisely and profitably applied to the very special national and world food conditions, food needs, and food possibilities as they exist at present. This calls for judgment, foresight, self-denial, the widest

kind of vision, the truest patriotism as well as scientific knowledge in the selection and use of whatever food we may be entitled to.

In the original scheme of primitive living, eating was very simple. Nature supplied a limited variety of needed foods, and gave to man the instinct to choose the proper one at the proper time. But with progress came many changes in our ideals and methods of living. The twentieth century, particularly, opened new possibilities, created new needs, provided many and varied means of satisfying those needs—all with a consequent effect on our food-supply, and in our attitude toward that supply. Improvements in agriculture, increased transportation facilities, developments in the science of food preservation, the practical application of chemistry and bacteriology to food materials, gave us a bewildering choice of foods. Wherever we lived, whatever food the world could grow was ours. Foods never known or grown before became common. The package with the label was created. Out-of-season foods, new foods, predigested foods, concentrated foods, specially prepared foods, ready-to-eat foods were pressed upon us. We were tempted and pampered at every turn.

Out of this abundance, came confusion, lack of appreciation, extravagance, over-indulgence, waste. Our instinct deserted us; we had no

knowledge of food values to take its place. We ate what we wanted rather than what the body needed. We spent a dollar to satisfy a craving that was not normal, when a penny might have bought the honest nourishment required. We ate more food, and had more meals than we needed. More money was spent on food than any real need could fairly justify.

And so we were living when the Great War came and stopped us. We have, suddenly and almost without warning, been forced to think, and must now change our ways. The world must go on a diet, and unless this diet is observed the strength and freedom of the world are at stake.

Briefly reviewed, conditions are as follows:

With the exception of the United States, the world is short of food. Even the United States is short of some foods, although it has its normal supply, even an abundance of other foods.

Out of this supply the United States must feed not only its own people, but those in other parts of the world who have given their all for liberty and our protection, and are now dependent upon us.

Conditions require that all foodstuffs exported shall be of the most concentrated kind. This includes wheat, beef, mutton, pork products, fat, dairy foods, sugar. But these important staples are the very foods of which the United States

is also short. Moreover, these are the very foods which have for years formed the foundation of our daily meals.

To spare these foods, to make them meet our own needs as well as the needs of those who are dependent upon us, we must eat less than our normal supply, waste not one particle, and make up what may be lacking in these staples by substituting other foods which we have in greater abundance, and which are not desirable for shipping.

And, last but not least, this stretching and division of our staple food-supply must be done without injuring the health or reducing the strength or vitality of the American people.

And here is where we, the housekeepers of America, must make our final great effort. We have been asked to make this great obligation, on the part of our country, possible and practical. It can and must be made possible and practical by:

1. **Eliminating all food waste; this means:**

Careful planning of daily menus.
Calculated buying of all food.
Proper care of food in the home.
Food preparation without waste.
Good cooking without spoiling food, or loss of food value.
Attractive service without unnecessary abundance.
Use of all left-over foods.

"Food waste is the greatest of all wastes, because it occurs three times a day, year in and year out." [1]

"It is the multiplication of minute quantities—teaspoonfuls, slices, scraps—by 100,000,000, and by 365 days that will save the world." [2]

It is the housekeeper who largely controls these minute quantities, and can save them for that multiplication which can do so much.

One slice of bread wasted every day in every home in the United States equals over 7,000,000 bushels of wheat in a year, or 365,000,000 loaves of bread.

One half-cupful of milk wasted every day in every home in the United States equals 912,500,000 quarts in a year.

One small butter-ball wasted every day in every home in the United States equals over 114,000,000 pounds in a year.

One small left-over scrap of meat wasted every day in every home of the United States equals 450,000,000 pounds of valuable animal food in a year—the edible portion of a combined herd of 538,000 beef animals, 291,000 calves, 625,000 sheep and lambs, and over 2,132,000 hogs.[3]

Why not change this waste into production?

[1] Arthur Train, in "The Earthquake."
[2] Herbert Hoover, in "Food Armies of Liberty."
[3] United States Department of Agriculture, Reports, May, 1917.

2. Substituting foods which we may have in abundance for staple foods needed and fitted for export; this means:

Sparing wheat: By substituting corn, rye, oats, barley, rice, buckwheat—even potatoes, bananas, peanuts, chestnuts.

Sparing beef, mutton, pork: By substituting poultry, game, fish, eggs, beans, cheese, nuts.

Sparing sugar: By substituting syrups, honey, dried fruits, sweet fruits, by providing less cake and pastry, fewer confections and sweet drinks.

Sparing fats: By using less fat in cooking, and not serving fried foods, rich cakes, or pastry.

Sparing dairy products: By buying milk with judgment, using it with care, and recognizing its full food value; by using all sour and skim milk; by using less cream and *none as a luxury;* by using no butter in cooking, and substituting vegetable fats.

Sparing all needed staple foods: By using fresh fruits, vegetables, and all perishable and local foods to the best possible advantage.[1]

Wheat is one of the most important of all the foods to spare. If we are fortunate enough to have a barrel or bag of wheat flour in the house, it should be made to last as long as possible by using it in combination with a definite proportion of other cereal, meal, or flour. Without privation or hurt of any kind, we can substitute in this way when baking any of our necessary bread foods, or when serving cereals in any form. Only a cupful saved here and

[1] See "Fresh Fruits and Vegetables as Conservers of Other Food," Farmers' Bulletin 817, United States Department of Agriculture.

there, in each one of our twenty-two million homes, providing the practice becomes a habit, soon measures many million bushels.

3. **Preserving all surplus perishable food against future need; this means:**

Canning.
Drying.
Storing.

Much food waste can be prevented by preparing ourselves to be "ready to can, preserve, dry, pickle, salt, or store" all surplus fruits and vegetables, or other perishable food that might otherwise go to waste.

When the Food Administration made its first great appeal in the fall of 1917, twelve million housekeepers signed the food pledge cards and entered volunteer food service. With an average of three to five persons to a family, this means that in a few months' time forty-eight million of our population had very decidedly changed their food habits of a lifetime. As time passes, this number will, without a doubt, be greatly increased, for it is now estimated that it may be many years before the ruin in Europe can be repaired and order and normal living once again restored. During these years thrift, conservation, and the "wise and careful" use of wheat, meat, butter, milk, sugar must continue to be the consistent refrain of our food creed.

This will mean that in the great majority of homes in the United States, in place of fine white bread and rolls and the customary cakes and pastry, coarser breadstuffs—made from whole wheat, corn, oats, rye, barley, rice, buckwheat in various interesting combinations—will be substituted.

It will mean that in these new breads and cakes, butter—the customary shortening—will no longer be used, but that other fats will be substituted—not only drippings, suet, chicken fat, but cottonseed, corn and nut oils of many varieties.

It will mean, too, that instead of eating these different breads spread with butter, butter will be spared occasionally, perhaps frequently, and peanut butter, syrup or honey or jam used in its place.

It will mean, further, that instead of the conventional roast beef, mutton, or pork for dinner, we will serve beans, combination cheese and cereal dishes, local game, poultry, fish, eggs.

It will mean fewer cakes, puddings, less pastry; it will mean more dates and figs and raisins and less sugar in whatever cakes and puddings are served; it will mean no icing on the cakes; it will mean that the use of fresh fruits and vegetables of all kinds will be greatly increased.

It will mean, moreover, individual appetite control. "Food conservation is a long, hard pull

every day, at every meal, for months at a time —possibly for years." While the Food Administration is trying to "adjust the food-supply to the world's appetite," as far as the one hundred and ten million people of the United States are themselves concerned, however, each must adjust his appetite to the world's food-supply, or the other adjustment will not work.

Surely we shall live, doubtless for some time, very differently in many ways than we did before the Great War came. In our patriotic enthusiasm, however, we must not forget that "the proper nourishment of every member of our family is our first duty," and that unless all these dietary changes are met with wisdom the desired end shall not be attained. We must not neglect to ask to what extent certain of these newer or different foods may be identical in nourishment with the original foods replaced. We must select and buy and prepare these different foods with judgment; we must plan our menus intelligently, so that, if a certain food must be omitted, something equivalent in food value is taking its place. Fortunately, in the majority of substitutes offered or available there is little chance for trouble. The Food Administration has thrashed the problem out too thoroughly for that; the normal food wealth of the United States offers a too safely flexible dietary.

"Oats, rye, barley, cornmeal, or other cereals give bread an equal or even greater food value than all wheat." [1] Pure honey, maple sugar, and reliable syrups can supply the energy value more normally obtained from butter, while the sparing of sugar in other ways more or less automatically controls any excess use of sweets in the diet. Fish, eggs, and poultry are all normal substitutes for beef, mutton, or pork; beans, nut and cheese dishes, properly prepared, understandingly served, and wisely combined with other foods, afford a wholesome and welcome change in the diet. The freer use of fruits and vegetables is always a blessing.

The question of fat substitutes offers, on the other hand, a somewhat more complicated problem. The peculiar or subtle difference in composition between vegetable fats and some of the fats of animal origin, more particularly the significant dietary importance of butter fat, is something that demands attention, especially in the homes where there are children:

> "Associated with fat in certain food materials, especially in the fat of milk and eggs, are minute quantities of recently discovered and as yet unnamed substances most important in nutrition. These are sometimes referred to as 'growth determinants.' We do not know yet exactly

[1] United States Food Administration.

> how much of these substances is found in different kinds of fat, or how much is needed by children or adults, but it is now impossible to consider the question of fat in the diet without considering them. Conditions in the warring nations of Europe, where the fat ration has been cut to the lowest limit, have shown that such a practice hinders the normal growth of children, the maintenance of health in adults, and the repair of body tissue after wounds."[1]

"The appeal of the Food Administration to reduce the use of fats is of serious national importance," but the added appeal, "and especially to limit butter to free use on the table rather than in cooking," is of equal national importance. Let us cut out all the butter in cooking if we will and should, but let us not be blind in our patriotism or sense of economy and omit to serve butter on the table—unless we are very sure that the extremely necessary food elements specifically attributed to and normally derived from butter fat are supplied in some other way. Where the quantity of butter normally served at table is consistently reduced, milk, cream, cheese, egg yolks, and the green-leaf vegetables or salad plants should be freely used.

So nationally important, in fact, is this whole question of fats, both economically and dieteti-

[1] "Ten Lessons on Food Conservation," United States Food Administration.

cally, that the United States Food Administration issued the following, shortly after it was first organized:

> "It is perhaps well to understand first of all just which fats are vegetable fats and which are animal fats. Cream, butter, oleomargarine, lard, beef and bacon drippings, suet, chicken fat, are all of animal origin; olive oil, cottonseed, corn, and nut oils are, of course, of vegetable origin. Occasionally one finds on the market a product which is a combination of a vegetable and animal fat. The housekeeper should learn the uses of all fats, so that she may not be limited when any commonly used fat has gone up in price or has been put on the list of those foods to be conserved." [1]

Doctor McCollum, nutrition authority of the United States Food Administration, added the following to the above statement:

> "Do not use butter for cooking. Do not demand solid fats for frying. Certain of the oils, particularly cottonseed and peanut oil, serve practically as well as do the high melting fats. We have a much greater supply of oils than of solid fats. A saving in this direction is very important. Milk or egg-yolk fats should always be supplied in the diet of children, for they contain something which is indispensable to health and growth. This element is not present in fats of vegetable origin."

[1] United States Food Administration Bulletin.

The question of milk is also most important, and its use and conservation should not be confused or misunderstood. While we are asked to conserve milk, we are urged, at the same time, to increase its use, and this issue is sometimes perplexing. Milk is one of our most valuable foods. Its use insures a good diet; it saves meat; it requires no cooking, therefore saves fuel and time. Because of its value, even when comparatively high in price, it is a cheap food. As the Food Administration says:

> "No substitute for milk as a food has ever been found. . . . Its importance in the diet of children under ten cannot be overestimated. . . . Experts say that every child under six years should have a quart of *whole* milk every day. . . . Whole milk for the children is playing safe; no matter what the price we cannot afford to let them go without it."

More specifically, milk contains all the food principles, in some proportion, required by the body—balanced proteins, carbohydrates, fat, mineral matter, and accessory factors. Quoting again from the Food Administration:

> Its protein is most adaptable to uses by the body in building and renewing tissue.
>
> Its sugar is easily utilized by the body.

It supplies lime; the lime salts, which are abundant in milk, are also important in building the body and keeping it in good condition; there is no other food from which lime salts can so readily be obtained; it would take, for example, 8½ eggs to provide the same amount of calcium as is contained in one glass of milk.
Its butter fat, because of its "growth determinants" (as described above), is absolutely necessary for children, and probably for older persons as well.

To which Doctor McCollum adds:

"Milk is an indispensable article of the diet of any people who wish to achieve. . . . Milk is worth much more than its energy value or its protein content would indicate. It is the great factor of safety in making good the deficiencies of the grains which form and must continue to form the principal source of energy in our diet. Without the continued use of milk, not only for the feeding of our children, but in liberal amounts in cookery and as an adjuvant to our diet, we cannot as a nation maintain the position as a world power to which we have arisen. The keeping of dairy animals was the greatest factor in the history of the development of man from a state of barbarism. We are now in a critical time when the dairy industry is in jeopardy. I feel it my privilege to point out that we are still dependent upon the dairy industry for our continued prosperity."—From *Brader's Gazette*, December, 1917.

In order that we shall continue to have, therefore, this very essential milk to meet our absolute needs, in order that the number of our herds —which very truly represent the strength of a country—shall not be decreased, the demand for milk as a food must be increased. The dairyman must be encouraged, milk production must be stimulated by *increased use*. Because of the immediate actual milk shortage, however, this increased demand for milk must be accomplished without waste, or careless or unfair use. The subtle complication is apparent, and can only be unraveled, step by step, somewhat as follows:

"Milk consumption in the United States should not fall below one pint of milk per capita per day."[1] From one pint to one quart of whole milk a day for each child, and from one-half to one pint for each adult is a wise allowance. A general demand for this amount would react favorably on the dairying business.

At the present time, however, with our population of over 100,000,000, "we produce only 39,354,116,300 quarts of milk a year. Of this 4.3 per cent. must go to feed calves, while 6.6 per cent. is used for the manufacture of ice-cream and condensed milk. 89.1 per cent. is left for butter, cheese, and consumption in fluid form. This gives each of us not more than 350 quarts of milk a year," or one quart a day

[1] Kellogg and Taylor, *The Food Problem.*

for everything—butter, cheese, whatever milk is used as milk, as well as the butter we must export. This at best means only one-half pound of butter apiece a week, a limited use of cream, and no milk wasted, if there is to be enough whole milk left, in fluid form, for the children.

Until our milk equilibrium can be restored, therefore, and while we must keep in mind increased consumption in order to encourage the producer a fair division of whatever milk is immediately available must be made, every drop of milk must be used to advantage, and all children—particularly those under six years—should be protected, and receive their needed and just measure of unskimmed milk. It is to insure this that we have been asked by the Food Administration to refrain from the use of butter in cooking, and cream as a luxury—unless, of course, a fortunate and abundant local or personal supply might otherwise justify its use. Butter for cooking, and cream merely to gratify the palate are *unessential*, and should not be used at the cost of table butter for another, or whole milk for a child. These are *essential* —and cannot go.

"Conservation as an economic and political term has come to mean the preservation of our natural resources for economical use, so as to secure the greatest good to the greatest number."[1] Conservation of milk means to use it, but to use it with judgment.

[1] Ex-President Taft.

The discipline, as well as food economy and education resulting from our living by the pledge, must show itself in greater national strength, in less narrow methods of living, in the years to come. And if, in this final effort, we, once more, honestly offer our best and most understanding service, then, hopefully, not only freedom for ourselves, but a new and stronger world freedom, shall be the great reward.

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Changes in the Food Supply, and Their Relation to Nutrition, Lafayette B. Mendel.

Food Industries, Vulté and Vanderbilt.

Food Thrift Series, United States Department of Agriculture.

Farmers' Food Bulletins, United States Department of Agriculture:

"Use of Corn, Kafir, Cowpeas in the Home," Farmers' Bulletin 559.

"Cornmeal as a Food," Farmers' Bulletin 565.

"Honey and Its Use in the Home," Farmers' Bulletin 653.

"Fats and Their Economical Use," Farmers' Bulletin 469.

"Economical Use of Meat in the Home," Farmers' Bulletin 391.

"Cheese: Economical Uses in the Diet," Farmers' Bulletin 487.

"Care of Food in the Home," Farmers' Bulletin 375.

NOTE.—The above, as well as other valuable bulletins on food and food conservation, may be obtained free of cost, or for a nominal sum, by addressing the Chief of the Division of Publications, or the Superintendent of Documents at the Government Printing Office, United States Department of Agriculture, Washington, D. C.

Weekly News Letter, United States Department of Agriculture.

Journal of the American Medical Association.
(Current articles.)

Food Bulletins, United States Food Administration.

NOTE.—Emergency information in connection with food and food conservation, as well as a bibliography of all new publications covering food, food conservation, and food needs of the world, may be obtained by addressing the United States Food Administration, Washington, D. C.

"Supplementing Our Meat Supply with Fish," Bureau of Chemistry, United States Department of Agriculture, Washington, D. C.

Also Special Bulletins — "The Bowfin," "Tilefish," "Sea Mussels," etc., Bureau of Fisheries, Department of Commerce, Washington, D. C.

See also references listed at close of Chapters III and X.

V

IMPORTANT FOOD FACTS

What Food Is :

Primarily, food is that which nourishes the body, keeping it alive.

"Life consists of a series of changes in the protoplasm—the birth, growth, and death of cells following each other in an interminable cycle. The processes of life can only go on when the cells are supplied with a well-balanced food suitable for their needs." [1]

What Food Does :

The body is composed of a number of chemical elements—carbon, hydrogen, oxygen, nitrogen, sulphur, phosphorus, chlorine, sodium, potassium, calcium, magnesium, iron, and traces of others. These elements are present in the body in approximately definite, relative amounts, forming certain chemical combinations that enter into the tissues and fluids of the body, and constitute the body substance.[2]

[1] William Tibbles, *Food in Health and Disease*, Preface, p. v.

[2] See Sherman, *Chemistry of Food and Nutrition*, chap. x.

In order that the life and activities and health of the body can be continued and maintained, these elements, in the required relative amounts, so as to insure the proper balance of the chemical compounds, must be preserved.

During the normal processes of life and living, however, these elements are continually spent, or lost, or used in some way, and must be replaced as they are needed, or the health of the body suffers and its activities and life will cease.

It is the mission of food to supply these elements as they may be required, and in such form as the body can use to advantage; the nutritive value of a food is measured by its ability to fulfil this mission.

To simplify the more or less complex relationship existing between the body and its food, food scientists compare the living body to a working engine or machine, although the human engine is far more perfect, ingenious, self-contained, and self-sustaining than any mechanical engine.[1]

In order to live:

1. The body must continue to work, and a normal body temperature must be maintained.

   The work of the body is of two kinds: That which goes on continuously and involuntarily inside the body, such as the action of the heart, lungs, and organs of digestion; that which the body does

[1] Credit References listed on page 73.

voluntarily, any form of muscular effort or exercise, such as walking, washing, playing—in other words, "doing things." Body heat or temperature is largely a result, or a left-over product, of the work done by the body.

2. The body structure must be kept sound and in repair.

3. The body functions must be properly regulated.

Food must serve these three great needs; the body requires, therefore:

1. *Food for fuel*, or as a source of energy or power to keep the body working, and of the required normal temperature—just as any engine or motor, whether steam or gasolene or electric, requires fuel of some kind to make it operate.

2. *Food for body growth and repair*—just as any engine requires basic material for its construction and repair.

3. *Food for body regulation*—just as any engine requires lubrication, special adjustment, and control.

In order to keep the body working properly and in good condition it is important that the food should be right in kind and quantity, just as any other type of engine requires its particular fuel in the right quantity, as well as proper materials for construction, repair, and regulation.

Technically, in the food consumed, the body must find:

1. Elements which it can utilize as a source of energy.
2. Elements which it can utilize as building material.
3. Elements which it can utilize for regulating purposes.

Kinds of Food:

But these elements can only be used by the body "in the form of certain definite compounds," [1] compounds similar to those materials which enter into the construction of the body itself. These compounds are known as

Proteins.
Fats.
Carbohydrates.
Ash Constituents (or mineral matter).
Water.

In addition to these essential principles, the body also requires

Minute but significant amounts of accessory factors, of which as yet little is known except that they are definitely needed by the body to sustain life, maintain health, and promote growth. There are, apparently, different kinds or types of these so-called "accessory factors," "vitamines," and "growth determinants," each

[1] Rose, *Laboratory Manual of Foods*, p. 1.

serving some different and specific purpose in body growth and regulation.[1]

It is further necessary for body health that these food principles and accessory factors be used in connection with some bulk or indigestible "waste" material, known as cellulose, and popularly spoken of as "roughage." Cellulose is "the material which composes the cell walls and woody fiber of plants." Its value to the body is largely mechanical, providing normal stimulation and exercise for the muscles of the intestines.

Fortunately, these chemical combinations or food principles, as well as the accessory substances and bulk material required by the body, are distributed throughout the world, in both plant and animal life, in the form of our commonly recognized food materials—grains, meats, milk, fruits, vegetables. There we find ready-made by nature, all the foods, combining all the elements properly compounded, which the body requires, and can utilize as fuel, building, and regulating materials. They are all there. We must choose aright, that is all.

For identification, to help us make wise selections, foods have been variously classified, grouped, and named by food authorities, accord-

[1] See L. B. Mendel, *Nutrition and Growth.*
Also, Tibbles, *Food in Health and Disease*, chap. xxiii.
Also, Kellogg and Taylor, *The Food Problem*, chaps. v and vi.
Also "Ten Lessons on Food Conservation," United States Food Administration, Lesson ix.

ing to their chemical composition or predominating usefulness to the body. Thus we have:

1. "Fuel Foods," which include:

Carbohydrates, represented by

Sugars, syrups, honey, jams and jellies, figs, dates, raisins, dried currants, and starchy foods such as tapioca, cornstarch, arrowroot, potatoes, bananas.

Milk, bread, cereal foods—such as wheat and wheat products, corn, rye, oats, barley, rice, buckwheat, dried lentils, beans, peas, also some vegetables containing much sugar, such as beets and old carrots, also sweet fruits, belong, *in part*, to this class, as they contain a large proportion of carbohydrate material; they contain, in addition, however, valuable varying amounts of the other needed materials.

Fats, represented by

Butter, cream, nut oils and fats, olive oil and other vegetable fats. bacon and other meat fats.

Milk, nuts, fat meats, egg yolks, chocolate also belong, *in part*, to this class, as they contain a large percentage of fat; they also contain, however, valuable varying amounts of other food materials.

Proteins,[1] represented by

Lean meats, poultry and game, fish, eggs, cheese, milk. With the exception of milk, which contains only 3½ per cent., these foods all contain a large proportion of protein material, varying, approximately, from 13 to 32 per cent.; they are known as "balanced," "perfect," or "efficient" proteins.

Cereals, breads, dried lentils, peas and beans, nuts, cocoa also belong, *in part*, to this class, as they contain a definite, even large, percentage of protein material; they are not "complete" proteins, however; they also contain valuable varying amounts of other food materials.

2. "Building-foods," which include:

Proteins, represented by

(as listed above).

[1] Since protein can be burned in the body to yield energy, it must be classed here as a fuel food, although, because of its importance as a tissue-builder, it is commonly considered as a *building-food* rather than as a *fuel food*. While proteins do serve the body as fuel, they are not required by the body for fuel. It is better and cheaper for the body to get its fuel from carbohydrates and fats, and a good diet is so arranged that protein foods are used chiefly for building purposes, and not depended upon for energy. If more protein is consumed than the body needs for building and repair, this excess protein is destroyed, leaving undesirable products to be eliminated in the urine and overworking the kidneys.

Ash Constituents, found in

Milk, cereals from whole grains, egg yolks, fresh fruits, green vegetables, dried lentils, peas, beans.

3. "Regulating-foods," which include:

Ash Constituents, found in

(as listed above).

Accessory Factors, found in

Almost all fresh foods—fresh milk, fresh meats, fresh fish, cream, butter, egg yolks, cheese, fresh fruits and vegetables, green-leaf vegetables and salad plants, whole-grain foods. Different types are found in different foods, however.[1]

Bulk Material, represented by

Fruits, vegetables, coarse cereal foods, coarse breads, bran—including some "hard" foods; the latter induce mastication, which both aids digestion and helps to insure sound teeth.

Water.

While water is not specifically a "food," viewed from the standpoint of nutrients for the body, it is as important and necessary as food.

"*Without water the elements could not be combined into an organism, nor could the organism carry out its physiological func-*

[1] See References listed on p. 56.

tions. It forms 58.5 per cent. by weight of the human body. The daily requirement is estimated from the average loss by the skin, lungs, and kidneys, which excrete a total of about eighty ounces a day. This loss must be made good by food and drink." [1]

Some water is present in all food. In raw, fresh-food materials—meats, eggs, milk, fruits, vegetables—it varies from 55 to 95 per cent. In prepared foods —flour, cereal products, crackers, dry breads—it averages, approximately, less than 10 per cent.[2]

For all foods, as we know them, we can find a place in the above accepted groupings. The chemical composition of foods varies very greatly, however; some foods—such as pure sugar or pure fat—contain only one of the needed food principles; other foods—such as fresh, whole milk or cereal products milled from whole grains—contain some proportion of all the needed principles. Consequently, some foods are more important and more nutritively valuable than other foods. This is particularly true of pure, whole milk and properly milled cereal products. These two foods together are particularly valuable, as they complete each other to an extent, and are therefore of such importance in the diet of children. "Milk and cereals together make a remarkable com-

[1] Tibbles, *Food in Health and Disease*, p. 6.

[2] See "Chemical Composition of American Food Materials," Bulletin 28, United States Department of Agriculture.

bination; 'bread-and-milk' is justified not only by experience, but by theory." [1]

The value of proteins, too, must be understood. "All proteins are made up of complex nitrogen products, which are often called 'building-stones.' Some proteins contain these 'building-stones' in proper proportion for the building of new tissue. Others lack some of the essential 'building-stones.' The foods containing the first type are called complete or efficient tissue-building foods. The others are known as incomplete or inefficient tissue-building foods. The value of meats in the diet lies in the fact that they belong to the complete type of protein foods, and therefore when used liberally the necessity for intelligent choice is eliminated. The list of perfect or efficient proteins includes beef, veal, mutton, lamb, pork, poultry, game, fish, cheese, milk, eggs. The inefficient proteins, those which need supplementing with more or less from those of the first group, are soy beans, peanuts, navy beans, wax beans, kidney beans, lima beans, dried peas, lentils, nuts, corn, wheat, oats, barley, rye, buckwheat. For the young child, the youth, and any one recovering from a wasting disease there must be combinations of protein foods which will give the right combination of 'building-stones.' For the young child milk stands first on the list. For the adult, the need for large amounts of the more nearly perfect proteins is not apparent. The diet of adults can be more easily restricted to a limited use of the first, and a liberal use of the second." [2]

[1] Lafayette B. Mendel.

[2] "Ten Lessons on Food Conservation," United States Food Administration, p. 26. See, also, Kellogg and Taylor, *The Food Problem*, chaps. v, vi, vii.

Digestibility, relish, and flavor are also factors in the value of a food; irrespective of its composition, the true value of a food can only be estimated according to the completeness with which it serves the body, and the ease and completeness with which the body can utilize the nutrients it holds.

> Good and bad cooking can greatly affect the digestibility and wholesomeness of food; a food as analyzed by the food chemist may be one product; as cooked and served on the table it can be quite another.

Since no one food alone—with the exception of mother's milk for a baby—contains enough of each required food element, in the correct proportions, to properly feed the body—to serve its three great needs—some representative of every group or class of foods, as outlined above, must be included, in some form, in a wholesome diet for normal people. Briefly summarized, to properly feed the body a variety of foods—different foods at different meals, and something different every day, is desirable. "Food fads" are unwise. A "narrow," "one-sided," or "restricted" diet can be most harmful.

How Much Food Is Needed?

In the early days of living, instinct told us what and when and how much to choose. But with civilized living we have lost some of our instinct, all conditions of living have become more complicated, and knowledge must now help us out in the wise selection of our food. A normal, wholesome appetite, under control, is always a good guide, however, as to the total amount of food required. If, in addition,

the importance of variety is observed, the proper balance of the needed elements will be more or less automatically supplied, and health, happiness, vitality, and the normal body weight for age and height result.[1]

Where such conditions as this exist, and the food-supply is normal and adequate, there is little need to worry about the feeding problem.

To insure family health, however, to prevent food waste, for purposes of economy, or in cases of special food need or any emergency calling for limited or restricted feeding, it is of very great advantage to know how to estimate the amount of nourishment required by an individual, for a day, under given conditions, and how best to satisfy that need. The present world food and feeding problem makes intelligent, balanced, measured feeding not only a necessity, but a duty to the world, neglect of which is almost crime.

Just how much total nourishment is required, just how much and what proportion of each necessary element should be represented in the day's food, depends largely on the age, sex, size of an individual, the amount and kind of work to be accomplished in a day, and sometimes climate, and individual peculiarities.

As a rule, the larger and more physically active a body the greater the food requirement. A large man or woman, doing muscular work, requires

[1] See Kellogg and Taylor, *The Food Problem*, pp. 123, 124.

more food than a small man or woman who is not active. Men require slightly more food than women. Growth is also an important factor. A child, or growing boy or girl, requires more food, in proportion to body weight, than a fully grown person. As age increases, and body activities decrease, less food is needed.

If too little total food is supplied, or too little of any one needed kind, the body suffers from under-nourishment, body tissues waste, weight is lost, and health and vitality are affected. If too much total food is supplied, or too much of any one kind, the body suffers from over-nourishment, poisons may accumulate, weight may increase beyond normal, and health and vitality are affected.

Approximately, almost nine-tenths of the total food required by the body is used as fuel; the balance is used for body construction or repair. These two requirements, when properly satisfied by means of the necessary variety of food, carry with them the special ash constituents and regulating factors also required.

Since the chemical composition of different foods varies greatly, the amount of total food required in a day—as served at the table—cannot very well be measured by weight or bulk. It must be estimated, instead, according to its nutritive value.

The amounts, in weight, of single food materials—such as pure protein, pure fat, pure carbohydrate—desirable for an adequate diet, under definite conditions, can, however, be esti-

mated. For the average individual these amounts are, approximately: [1]

Protein:	At least 70 grams (2.5 ounces) and not over 90 to 100 grams (2.8 to 3.5 ounces)—depending upon age and size.
Fat:	Sixty grams (2.12 ounces) is a safe standard.
Carbohydrate:	While the total amount of carbohydrate (starch and sugar) depends very largely on physical activity, of the total amount required, however, from 1 to 3 ounces is a liberal allowance for sugar.

How Food Is Measured:

The nutritive value of food—that is, the carbohydrate, fat, and protein elements—can be measured very accurately in terms of the energy or heat it is capable of liberating in the body. The unit of this measure is named a *Calorie.*

The amount of heat given off during the "combustion" or "oxidation" of food is a measure of the energy value of that food. Scientists can measure this heat very accurately by burning the food in a specially constructed apparatus called a "calorimeter." The calorie is the unit of measure.

[1] See Kellogg and Taylor, *The Food Problem*, chaps. v, vi, vii.
Also "Ten Lessons on Food Conservation," United States Food Administration, p. 46.

One calorie is "about equal to the amount of heat required to raise the temperature of one pound of water four degrees Fahrenheit."

It is now known that every portion or pound of food contains a certain number of calories or fuel units, the number varying according to the chemical composition of the food. The number of calories a given portion or weight of food contains is called its "fuel value," or its "calorie value."

Some foods, in a given quantity, are capable of liberating much energy, and contain, therefore, many calories; they are said to be *high in fuel value*, and are called *concentrated* foods.

Other foods, weight for weight, do not liberate as much energy, do not, therefore, contain as many calories, and are said to be *low in fuel value;* they are called *bulk* foods, and contain a large proportion of water and indigestible matter.

The fuel or calorie value of some common foods is illustrated as follows: [1]

1 pound of butter	3,605	calories
1 pound of cheese, American	2,055	"
1 pound of sugar	1,860	"
1 pound of wheat flour	1,660	"
1 pound of lean beef, about	900	"
1 pint of milk (one pound)	320	"
2 medium slices bread	100	"

[1] See Bulletin 28, United States Department of Agriculture.
Also, Fisher and Fisk, *How to Live*, pp. 170–190.
Also, Rose, *Feeding the Family*, Appendix.

3 plain crackers (large)	100 calories
1 banana	100 "
1 tablespoonful olive oil	100 "
1 head lettuce (large)	100 "
1 cupful orange juice	100 "
1 egg	75 "
1 apple or pear	75 "

It is also known that the body requires a certain or definite number of calories in a day, and that this number depends largely upon age, sex, size, and muscular activity. For example, approximately figured: [1]

Laborer—hard work	4,000 to 6,000	calories a day
Soldier's ration	3,500 to 4,500	" "
Farmer	3,500 to 4,000	" "
Business man	2,500 to 3,000	" "
Active woman	2,200 to 3,000	" "
Boy of sixteen	2,600 to 3,200	" "
Girl of sixteen	2,300 to 2,800	" "
Child of four	1,400 about	" "
Seventy, or over	1,800 about	" "

The calorie requirement of an individual may be very fairly estimated according to age, height, weight, in relation to the day's activity. For example, approximately figured: [2]

> The calorie requirement of an individual when sleeping or resting is 12 calories per pound—normal body weight [3]—per day.

[1] See William Tibbles, *Food in Health and Disease*, chap. iv.
Also, Graham Lusk, *Basis of Nutrition*, chap. ii.
Also, Kellogg and Taylor, *The Food Problem*, chaps. v, vi.
Also, Rose, *Feeding the Family*, chaps. iii, iv, x, xi, xiv.
[2] *Ibid.* [3] See tables on p. 247.

The calorie requirement of an individual doing light work is 16 or 17 calories per pound per day.

The calorie requirement of an individual doing moderately hard work is 18 to 20 calories per pound per day.

The calorie requirement of an individual doing hard, muscular work is 20 to 23 calories per pound per day.

The calorie requirement of children is higher: [1]

1 to 2 years old....	45 - 40	calories per pound
3 to 5 years.....	40 - 35	" "
6 to 9 years.....	35 - 30	" "
10 to 13 years.....	30 - 25	" "
14 to 17 years.....	25 - 20	" "

Thus to estimate the calorie requirement of an individual simply multiply the normal body weight by the required number of calories, according to age or occupation. For example, for a person doing light work multiply the normal body weight by 16 or 17; for a person doing hard work, by 22 or 23; for a child of three, by 40, etc.

In cases of overweight, less than the normal calorie requirement should be eaten; this is most successfully managed by eliminating concentrated foods of high calorie value—butter, sugar, cream, etc.—and substituting bulk foods low in fuel value, such as fruits and vegetables. The secret of weight reduction is to eat less than the body

[1] Rose, "Some Food Facts," Special Bulletin, Teachers College, New York, N. Y.

really needs for its day's work; in this way some of the excess food stored in the body in the form of fat is used.[1]

In cases of underweight, more than the normal requirement should be eaten. [1]

By knowing the two facts—*the calorie value of any given food or portion of food, and the calorie requirement of an individual*—it is comparatively simple to combine them, and feed very accurately according to measure—should need require it.

The mere calorie value of foods must not be confused, however, with the complete physiological and nutritive value. The kind of calories—whether protein, or fat, or carbohydrate—is as important as the number. All should be represented in the day's total food, and they should be so assembled from a variety of foods that they will automatically supply the mineral matter or ash constituents and peculiarly important accessory factors also required, but which cannot be measured in calories.

As has been estimated, in a good diet the different food materials should be represented, approximately, as follows: [2]

Protein	12 per cent.
Fat	18 "
Carbohydrate	68 "
Mineral matter	2 "

[1] For a clear discussion, see Fisher and Fisk, pp. 212–220.

[2] See References listed at the close of this chapter.

Rose, *Feeding the Family*, chaps. v–xi, is particularly helpful.

Also, Kellogg and Taylor, *The Food Problem*, chap. v.

In calories, taking 2,500 as the average, this division would read, approximately:

Protein	300 calories
Fat	500 "
Carbohydrate	1,700 "

Or, estimated in grams, it reads: [1]

Protein	70 grams
Fat	60 "
Carbohydrate	450 "

Or, estimated in ounces, it reads: [2]

Protein	2.5 ounces
Fat	2.12 "
Carbohydrate	7. "

Although small, the proportion of protein calories is particularly important. Too little protein is harmful, and too much equally so. With too little protein, body tissues waste; with too much, poisons accumulate, and kidneys and liver are overworked. Children, because they are growing and developing, require *slightly* more protein in proportion to body weight than grown people. More than this, however, the "chief concern in the diet of a growing child is not the amount of protein, but the presence of bal-

[1] One gram of protein will yield 4.1 calories.
One gram of starch will yield 4.1 calories.
One gram of sugar will yield 4 calories.
One gram of fat will yield 9.3 calories.

[2] One ounce of protein will yield 113 calories.
One ounce of carbohydrate will yield 113 calories.
One ounce of fat will yield 255 calories.

anced protein." This is one reason why the use of milk is urged.[1]

The ash constituents and accessory factors of food, which cannot be measured in calories are as important as its calorie value. Carbohydrate, fat, protein, without ash constituents and accessory factors, will not feed the body. As has been said, however, if the calorie requirement is satisfied by means of a *variety* of food, the necessary ash constituents and regulating factors will also be supplied.

An apple or an egg valued at 75 calories may, under some conditions, do the body more good than a piece of candy or pastry containing 300 calories. This is where instinct can play an important part in food selection, and where judgment as well as knowledge is needed.

The Cost of Food:

The market price of food does not indicate its nutritive value. Many cheap foods are more nourishing than many expensive foods. Foods that furnish the greatest number and variety of calories, in digestible form, or serve the body most completely for least money, are cheap foods.

Milk, cereals, bread are normally cheap foods because the return in nourishment—both in quantity and in kind—is large for the money spent; dried beans and lentils contain much nourishment, both in quantity and in kind, but are not so easily di-

[1] See chap. iv, p. 46; also, chap. vi, p. 81.
Also, Kellogg and Taylor, *The Food Problem*, pp. 112–115.

gested; their digestibility must be increased by careful cooking.

A quart of whole milk contains, approximately, 650 calories, of which some are fat, some protein, and some carbohydrate; milk contains, as well, valuable ash constituents and certain regulating factors; moreover, milk requires no cooking or other preparation, and is an easily digested food. Thus, at 12 cents a quart, or even more, one is buying valuable nourishment for little money.

Market prices range from one-half a cent to five cents or over for each 100 calories of nourishment.

Examples: [1]

When buying milk at 12 cents a quart, which is 650 calories, we are paying approximately 2 cents for each 100 calories of nourishment.

When buying steak, lettuce, canned fish, we are paying approximately 5 cents for each 100 calories of nourishment.

If we know what food does, what each food contains, how much is needed, how to measure it, how to value it, it is always possible, *according to the need of the moment*, to get the best and the most for the money that can be spent, to make every bit of purchased nourishment serve to the fullest extent, and to make the best possible use of every food available.

When our country calls, as it has been calling, "Spare wheat," the housekeeper who knows her food facts will be able to respond without sacrificing the

[1] See Rose, *Feeding the Family*, pp. 426–429.

health of her family, the income of her household, or the welfare of the world.

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See also references listed at close of Chapter IV.

VI

PLANNING THE MEALS

There is no royal road to food conservation. It can be accomplished only through sincere and earnest daily co-operation in the twenty-two million kitchens and at the twenty-two million dinner-tables of the United States. . . . This co-operation and service I ask of all in full confidence that America will render more for flag and freedom than king-ridden peoples surrender at compulsion.

—Herbert Hoover.

EALS must both feed and please. A good meal is that which supplies the right foods in the most wholesome and attractive form, without waste, and at the lowest cost—including labor, fuel for cooking, as well as the money spent for the food itself. In addition to this, to-day—during the critical period through which we are now passing, a good meal must not only meet these requirements, but in its planning and preparation the special food needs of the world must never once be forgotten.

Under more normal conditions it was not difficult to provide good meals. Under the changed

and new conditions which have been gradually creeping up upon us, culminating in the great home and world food problem now confronting us, the most careful thinking every step of the way is required—intelligent, clever planning, wise purchasing, good, skilfully managed cooking, attractive, happy service.

Of these steps, the first, perhaps, that of planning the meals, requires the most thought, for we can no longer provide good meals except through the understanding application of the food facts assembled in the preceding chapter. It is the only way to give every one the best and the most for the least; to play fair, as it were, to every interest—home, country, self. Fortunately, this is not really as difficult as it may sometimes seem. In order to feed wisely, economically, and patriotically it is not necessary, *literally*, to weigh and measure *every* meal. We could not if we would. Scientific menu-building means, bluntly, only that we should become so familiar with the most important food facts that we are able to reduce this knowledge to common sense, habit, or second nature for daily practice, and use it, technically, as a checking system, whenever special need demands.

If the family is dissatisfied, if there are doctor's bills, if children are fretful or white, if we are spending more money for food than the family

budget allows, then cold science must come to our rescue until we can find the cause of the trouble, and a remedy. If there is no trouble—if the family is well and happy, if there is neither waste nor extravagance, if the meals appear with little effort, if we know how to substitute foods equally good to take the place of those denied for any reason, because of poverty, scarcity, crop failures—then, although we may not realize it, we are feeding *scientifically.*

Briefly reviewed, from the facts outlined in Chapter V, we now know:

> That the food elements include proteins, fats, carbohydrates, certain ash or mineral constituents, small but significant amounts of accessory factors, water, and bulk; that these various principles act as fuel, repair, growth, and regulating material for the body, and are present in varying proportions in natural foods; that they are all needed by every normal, active body, the exact proportions of each element, and the total amount of nourishment depending largely on the age, sex, size of an individual, and the amount of work to be accomplished in a day; that this nourishment must be supplied from a variety of foods, and that quality, digestibility, proper cooking, flavor, relish, appearance are all part of the complete dietetic value of any food.

Moreover, we have learned and must remember:

That the market price of food in no way determines the nutritive value; that, for practical purposes, the nutritive value of a food is best measured according to the number of calories it contains; that some foods—weight for weight—contain many more calories than other foods; that every individual requires a certain, varying number of calories in the course of twenty-four hours; and that by understanding these two facts it is possible to feed a family well on a certain sum of money, when, without this knowledge, the same family might be poorly fed on twice that sum.

But, valuable as the calorie method of housekeeping may be, in our enthusiasm to make every bit of purchased nourishment count high, we must not overlook the fact that the number of calories required must be totaled from the proper combination, cooking, and serving of all the required nutritive elements.

Meals for a week might be so arranged that they would provide the correct number of calories, and yet not supply the necessary range of carbohydrates, fats, proteins, the necessary mineral matter, the peculiarly necessary accessory factors. In order to satisfy his curiosity a physician lived on nothing but sugar for a month; at the end of the month he died.[1] The necessary calories were all there in number—but not in kind. Some sugar may be desirable for children, but children who eat their quota of calories in the

[1] *Cf.* Lusk, *Fundamental Basis of Nutrition*, p. 16.

> form of candy or cheap cake have no appetite left for the other nutritive elements needed by the body, and trouble follows. Again, meals might supply all the calories, including all the needed elements, and yet be so unattractive in food selection, combination, cooking, flavor, or service that they would not tempt, and to that extent would not nourish properly.

To supply all the needed nutritive elements, properly balanced, in wholesome, appetizing combinations, for the money allowed by the family budget, without unnecessary labor, and without ever once forgetting our part in the bigger food and feeding issue of the world, is no small problem in itself. The only way to solve it is through the kind of meals we plan.

Family needs, season, local food supply, practical conditions or ideals of living, and the sum of money allowed by the family budget are all important considerations in determining the type of meals served:

> A meal may consist of one, two, or more foods served as separate dishes, or it may consist of several foods combined in one dish. Simple meals, yet served without loss to any member of the family of the nourishment and happiness which is due, are not only now necessary, but rapidly becoming popular as their true worth is recognized.
>
> Each meal should be considered in relation to the other meals of the day or week, and every group

and type of food represented, in some form, in the course of a day's feeding—*some carbohydrate, some fat (for fuel), some protein, some mineral matter (for body building and repair), some regulating material, some bulk or waste, some raw food, some hard food.* The simplest way to insure this is to serve as much variety as possible; not necessarily at one meal, but in the course of a day—or even the week. In this way—and excepting definite over- or under-feeding—the proper balance of the needed elements will be more or less automatically supplied.[1] *Few dishes at one meal, and varied meals is a good rule.*

> Variety must not be confused with elaboration. Variety, in connection with meals, is only intended to mean that, as far as practical, we should make use of all the wholesome foods wisely provided by nature, and so avoid possible harmful effects of a narrow or one-sided diet. Moderate, varied feeding is a safeguard against eating too much or too little of any one food material or element. Variety, also, prevents loss of appetite through monotony.

Since dinner is the most important meal, including, as it normally does, at least half of the daily food required, it should be planned first, and the balance of the nourishment required then divided, approximately, between breakfast and lunch or supper. Moreover, the food served at dinner will largely determine the kind of food needed for breakfast and supper or lunch.

Not more than one food or dish rich in protein—meat, fish, eggs, beans, cheese (when used as a main

[1] See chap. v, pp. 69, 70.

dish)—should be served at one meal; it is better, perhaps, in a majority of cases—particularly for adults who do not need food for body growth—to serve only one "protein-rich" food a day, and to have one or two entirely "meatless" days a week. There is protein enough in bread, cereals, milk, nuts to supply what may be needed by the body on those days when "meats" are omitted entirely. At every meal either fruit in some form, or a green vegetable, should be served as regulating material. "Fuel foods"—breads, cereals, potatoes, sweets—served as required will supply the balance of the nourishment. Some "color" and "flavor" should also be included in every meal.

All meals which must cover the feeding of both children and grown people require special thought and most careful planning. Very young children must, of course, be specially provided for; they require different food, served at different times and in different quantities.[1] School boys and girls also require careful, regular feeding; they need, urgently, the food materials which growth and development are constantly exacting, and can use more food—although it must be wisely selected—than adults.[2]

All children require easily digested foods that are not stimulating or highly seasoned. Children re-

[1] For advice and practical help, see:
"Food for Young Children," Farmers' Bulletin 717, United States Department of Agriculture.
Also, *Feeding the Family*, Rose, chaps. v, vi, vii.

[2] *Feeding the Family*, Rose, chap. ix.
Nutrition and Diet, Hall, chap. xi.
"School Lunches," Farmers' Bulletin 712, United States Department of Agriculture.

quire particularly the elements of growth found in fresh foods, milk, eggs, real butter, cream; also fresh fruits and green vegetables, well-cooked cereals, and well-baked, dry breads; they should not have tea or coffee, fried foods, or pastry.

A quart of pure, whole milk a day is a safe and wise foundation for a child's diet through and even beyond the twelfth year; it insures "balanced protein," as well as lime for body-building, and the desired amount of butter fat; this milk may be taken as a beverage or in combination with cereals, in cream soups or in simple desserts. If this amount is not practical for any reason, at least a pint, if possible, should be provided. A quart, however, is particularly necessary for children under six years. (See chap. iv. pp. 46–49.)

Unless the value of a careful diet is recognized, one can scarcely expect a child to grow into creditable manhood or womanhood. The unhappy results of irregular habits and poor food are not always apparent at once, but the hurt of unwise feeding is bound to come—some day, just as surely as the health and strength and joy from proper feeding are also bound to come.

Fruit, cereal, milk or cream, bread in some form, with coffee or milk or cocoa, is always a good breakfast. More or less of this, or selections from this, may be eaten, according to need. Eggs or fish may be added in the case of growing boys and girls where special protein nourishment is required, or sometimes in cases where an active day begins early in the morning, with heavy work to be accomplished

out of doors before noon. Dishes combining cereal and eggs—such as oatmeal muffins or spoon corn-bread—are often practical and economical.

Nourishing sandwiches with lettuce, or fresh fruit, served with tea, milk, cocoa, or a fruit beverage make a good lunch or supper. A cream or bean soup, or chowder, with rolls and butter, is a good substitute—with fruit and a cookie added for fun and a relish. Salad, with biscuits or muffins, followed by a light dessert, offers other possibilities.

Meat or fish, one or two green vegetables, one starchy vegetable, bread and butter, and a simple dessert are normally the rule for a good dinner. For economy, such combination dishes as stews, soy beans and rice, samp and cheese, with coarse bread and butter, followed by salad or a fruit pudding or dessert, may be substituted.

Soup is sometimes desirable, but not essential; if the dinner is substantial, and soup is served, it should be a thin, clear soup; thick soups can be so made and served that they furnish complete meals in themselves.

A dessert should be estimated as part of the nourishment of a meal, not as an extra that does not count. A substantial dinner should be followed by a very light dessert—such as fresh fruit, fruit salad, or a simple ice. A light dinner may be completed with a nourishing dessert—such as rice pudding, custard, fruit shortcake, steamed raisin pudding; this is frequently an economical method of "stretching" a dinner somewhat lacking in quantity or nourishment.

A dinner of two or three courses, properly planned and nicely served, can supply all the food and esthetic satisfaction required; more courses than this are usually unnecessary, and frequently imply overfeeding.

In planning meals the following system may be helpful:

1. *Consider family needs:*

Number in family, age of each, normal weight, activity, physical condition.

Estimate approximately total amount of food required daily.[1]

Note type of food and dishes—according to individual need, and season of the year—best fitted to supply this required amount of food:

Note what staple or essential foods are required; allow, if possible, one quart of milk a day for each child, and from one-half to one pint for each adult; do not exceed 3 ounces of fat, and approximately 2 ounces of sugar per capita;[2] use a variety of flours and cereals.

Do not overlook the importance of fresh food, or some raw food, and the general regulating value of fruits and green vegetables.

With some hot weather exceptions, at least one hot dish at a meal is desirable.

[1] See chap. v, pp. 62–71.
[2] See *The Food Problem*, Kellogg and Taylor, chaps. v, vi, vii.

Do not use the same food twice at one meal.

Food eaten between meals should be estimated as part of the regular allowance.

2. *Consider the food supply:*

Be readily familiar with the composition of all common foods, so that if certain needed foods are not available, others, equally good, may be substituted.

Note all food on hand, before purchasing; note what additional food may be required.

Note what foods are seasonable, easily available, or abundant.

Note what local foods are available—in the garden, in a neighbor's garden, in the town, in the state; remember the wild greens—dandelion, cress, sorrel, etc.

Note what foods are scarce or restricted, and must be spared because of world needs; note what substitutes can be used.

3. *Consider the cost of food:*

Determine what foods most readily available for the money which may be spent (the sum allowed for food by the family budget) will best satisfy family needs; select these foods.

Calculate cost of food not only in relation to market prices, but in relation to nourishment obtained, digestibility, proportion of edible material, time required for preparation.

Balance the cost and value of packaged foods against bulk foods; raw, against ready-cooked; home-made bread against bakers': in-season foods against out-of-season, etc.

4. *Determine type of meals:*

That will best serve family needs.
That are appropriate for the season.
That will permit foods selected to be served to the best advantage—all interests considered, health, convenience, and an attractive table.

5. *Plan meals for a week in advance:*

Write these down on cards, to be filed in a cabinet, or in a loose-leaf notebook. When practical, this is the wisest and most profitable way to manage; it prevents confusion, saves money, also time in marketing and cooking, and insures better meals and greater variety. Menus proving satisfactory may be kept for repetition or reference: unsatisfactory menus may be discarded.

Prepare different types of menus for different needs—school-luncheon menus, picnic menus, quickly prepared dinners, fuel-saving menus, cold weather menus, menus for special occasions, etc.

Make lists of suitable combinations of foods.[1]

[1] For suggestions, see:
Every Day Menu Book, S. T. Rorer.
New Cook Book, S. T. Rorer.
How to Cook and Why, Condit and Long, chap. xiv.
Feeding the Family, Rose, chap. xii.

Keep a list of new dishes or new foods discovered from time to time. "Surprises" prevent monotony and sustain interest in meals.

Keep selective food lists on hand—meat-substitute dishes, breads without wheat, desserts without sugar, etc.

6. *Do personal marketing:*

Avoid ordering by telephone; pay cash; carry food home; accept only reliable packaged goods which can be guaranteed; try new foods; when buying perishables, do not buy more than can be used to advantage; when practical, buy staples for a definite period in advance—this saves time, deliveries, inconvenience, money. Do not be ashamed to buy carefully.

SELECTIVE FOOD LISTS

To Spare Wheat—Serve

Barley Bread
Barley Scones
Boston Brown Bread
Bran Fruit Gems
Buckwheat Cakes
Buckwheat Muffins
Corn-breads and Muffins
Corn Griddle Cakes
Corn-Rye Gems
Corn Waffles
Corn-Wheat Bread
Date-Rye Muffins
Hominy Popovers
Nut Brown Bread
Oatmeal Bread
Oatmeal Cookies
Oatmeal Muffins
Oatmeal Scones
Rice Gems
Rye Bread
Rye Meal Biscuits
Rye Gingerbread
Rye Liberty Cake
Southern Spoon Bread
Soy Meal Gems

To Spare Meat—Serve

Beans, Baked	Bean Soups
Beans, Stewed	Cheese, with Cereals
Cheese Purée	Cheese Soufflé
Chowders, Fish	Chowders, Vegetable
Cocoa and Chocolate	Eggs, with Cereals
Eggs, with Sauces	Eggs, with Vegetables
Fish	Lentils, with Rice
Lentil Soup	Local Game and Poultry
Milk	Mushrooms, with Vegetables
Nuts	Nut Breads
Nut and Cereal Dishes	Omelets, with Cheese
Omelets, with Vegetables	Peanut Butter Sandwiches
Vegetable Dinners	

To Spare Sugar—Serve

Dried Fruits	Dates
Date Puddings	Dates, with Cereals
Figs	Fig Puddings
Fresh Fruits	Fruit-Nut Candies
Honey	Honey Cakes
Honey Frosting	Honey Pop-corn Balls
Maple Syrup	Maple-sugar Cakes
Maple-sugar Candies	Maple-sugar Frosting
Molasses	Molasses Cakes
Molasses Puddings	Prune Puddings
Raisin Breads	Raisin Cakes
Raisin Puddings	Stuffed Dates
Vegetable Candies	

To spare fat, check all waste, use vegetable oils and nut butters in cooking, and do not serve fried foods or pastry.

"If each individual in the United States consumes a half-pint of milk per day, the amount of meat that may be regarded as necessary does not exceed two ounces per capita per day."

CONSERVATION MENUS

The following menus have been arranged, from time to time, to cover different needs. To get the most food satisfaction for the least outlay—in money, time, labor, fuel—has been the central thought in planning them. Since conditions in every home differ, however, these menus can be offered as sample suggestions only, with the hope that they may be of value in helping to solve some of the many housekeeping problems as they occur. Dishes similar in food value may be substituted for any dishes mentioned which may not be practical, or consistent with the food needs of the world as they develop. In the case of very simple meals, enough in quantity must be provided to make up for lack in variety. Young children must, of course, be specially provided for.

WHEN PLANNING MEALS REMEMBER

That milk is a valuable food, and cheap, because of its value, even when comparatively high in price; it requires no cooking; its use saves meat, fuel, time, and insures a good diet. From one pint to a quart of whole milk a day for each child, and from one-half to one pint for each adult, is a wise allowance. "Milk consumption in the United States should not fall below one pint of milk per capita per day." [1] A general demand for this amount would not only help to save the needed meat, but would increase the dairying business, which is most important, since the strength of a country can be measured by the size of its herds and the number of its milch-cows.

"That cream should not be used as a luxury, nor should butter be used in cooking," until the milk supply is again adequate or abundant, or unless a fortunate local, personal supply might otherwise justify its use.

That fresh fruit is a necessary food, and requires no cooking; its use saves sugar, fuel, time, and insures a good diet; it also saves fats and wheat flour frequently used in making desserts not really needed.

[1] Kellogg and Taylor, *The Food Problem*, chap. vi.

SIMPLE BREAKFASTS

Nourishing—Easily Prepared

1

Stewed Figs and Raisins
Hominy Popovers, Butter
Coffee Milk

2

Orange Apple Sauce
Oatmeal, Top Milk
Whole Wheat Rolls Coffee

3

Sliced Bananas, with Dates, Cream
Shirred Eggs Toasted Muffins Marmalade
Coffee Milk

4

Prunes and Barley, Top Milk
Rye Bread Honey
Coffee Milk

5

Peaches and Grapes
Southern Corn Waffles, Maple Syrup
Coffee Milk

6

Stewed Apricots
Cornmeal Mush, Top Milk
Date-Rye Muffins Coffee

7

Sliced Oranges
Broiled Salt Mackerel Creamed Potatoes
Toast Coffee Milk

TEMPTING BREAKFASTS

For Hot Mornings

1

French Toast, Strawberries
Coffee Milk

2

Chilled Orange Juice
Molded Hominy Mush, Cream
Blueberry Gems Coffee Milk

3

Wild Blackberries
Rice Cakes, Honey
Coffee Milk

4

Sliced Bananas, with Raspberries, Cream
Graham Rolls Butter
Coffee Milk

5

Cold Rice, Peaches, Top Milk
Coffee Cinnamon Coffee Cake

6

Tomato Omelet Corn-Wheat Rolls
Coffee

7

Berries Molded Wheat Cereal, Top Milk
Raisin Brown Bread Coffee

8

Chilled Clabbered Milk, Cream
Oatmeal Bread Marmalade
Coffee

FOR CHILDREN WHO COME HOME AT NOON

School-children who finish their work at twelve o'clock, and are free to enjoy the afternoon in active play out of doors, require a substantial meal in the middle of the day. When this can be provided, a light supper at night is all that is necessary. The following dinners are practical and wholesome, and may suggest possibilities:

1

Vegetable Broth Oatmeal Bread
Spinach, with Poached Eggs, Bacon Curls
Compote of Rice, with Peaches

2

Chicken Fricassee Noodles Diced Carrots
Mixed Green Salad Barley Bread
Pineapple Tapioca

3

Split Pea Soup Hard Rolls
Celery, Apple and Lettuce Salad
Chocolate Bread Pudding, Marshmallow Sauce

4

Cream of Carrot Soup, Croûtons
Panned Chicken Baked Bananas Celery
Whole Wheat Bread Blackberry Jam

5

Cream of Salmon Soup
Lima Bean Omelet Jacket Potatoes
Fruit Rye Bread and Butter

6

Broiled Chopped Beef Baked Potato
Creamed Onions Oven Dried Bread
Zuñi Peach Pudding, Peach Syrup

INEXPENSIVE TWO-COURSE DINNERS

1

Black Bean Soup Rye Bread New Green Onions
Grandmother's Strawberry Shortcake, or Fruit Salad

2

Oxtail Stew, with Noodles Dandelion Salad
Fruit Come Again Cake

3

Calcutta Rice Asparagus, Melted Butter
Quick Corn Sally
Jellied Fruit, Custard Sauce

4

Baked Samp and Cheese
Calico Salad Rye Muffins
Frozen Strawberries Sponge Cake

5

Lentils and Rice Whole Wheat Bread
Cabbage Salad Cheese Nut Balls
Florida Ice Sugar Cookies

6

Leek and Potato Soup
Brown Bread Cottage Cheese
Quick Apple Dumpling, Hard Sauce

7

Soy Bean Stew Rolls Celery
Little Bread Puddings, Raspberry Meringue

8

Steamed Sea Mussels or Clams
Bermuda Salad Cheese Oatmeal Bread
Blueberry Shortcake, or Rice Pudding, Fruit Sauce

FUEL ECONOMY MENUS

Fuel saving is of just as great national importance as the right kind of food sparing. To save fuel in cooking, do not forget all the possibilities of "fireless-oven" cooking; do not forget that complete dinners may be cooked over one burner by using a two- or three-story steamer; do not forget the value of the fireless cooker for overnight cooking—particularly for cereals, beans, vegetables, stewed fruits, or a piece of meat for "cold cuts"; do not forget to bake breads, puddings, cakes in small pans; do not forget to cook enough at one time to cover several meals; do not forget the many foods that require little or no cooking—fresh fruits, dates, figs, raisins, nuts, salads, milk, cocoa or chocolate, cheese dishes, eggs, fish, cream soups.

Cold Weather Dinners

1

Chicken Casserole, with Vegetables
Celery Grape Jam Ripe Olives
Baked Stuffed Apples, Marshmallow Sauce

2

Fireless Flank Steak, with Spaghetti
Graham Bread Spiced Crabapples
Fruit Cocoanut Jumbles

3

Cream of Scallop Soup
Rice and Vegetable Salad Rye Bread
Orange Jelly Spiced Oat Cookies

Hot Weather Dinners

1

Jellied Fowl Rice Salad, with Escarole
Corn-Wheat Rolls Orangeade
Cantaloupe Surprise

2

Panned Fish Parsley Potatoes
Sliced Tomatoes and Cucumbers, French Dressing
Cheese Wafers
Strawberry Mousse or Custard

3

Hot Clam Broth
Débutante or Summer Salad Barley Rolls
Chilled Peaches Cookies, or Brown Bread Ice Cream

4

Cream of Carrot Soup
Clam Omelet Beet Greens Peanut Bread
Watermelon

5

Fruit Cocktail
Creamed Chicken, with Mushrooms New Peas
Corn on the Cob
Chocolate Junket Liberty Cake

6

Spinach Florentine
Iced Coffee Tiny Tea Biscuit
Shredded Pineapple, with Bananas

A Few Luncheon Suggestions

1

Tomato-Cheese Rarebit Toast
Peach Salad Wafers

2

Oatmeal Crackers, Milk
Dates or Berries

3

Cream of Turnip Soup, Croûtons
Cereal-Prune Bread Apples

4

Food-Fruit Salad
Hot Cocoa Brown Bread Sandwiches

5

Split Pea Soup
Oven Dried Bread, Butter
Fruit Maple Sugar

6

Chicken Curry Soup Potato Bread
Bean Salad, French Dressing
Figs Apples

WHEN CARRIED TO SCHOOL IN A BASKET

Let the school lunch be easily digested and nourishing. Give enough, but not too much. A brown, whole-wheat or cereal-bread sandwich, with good butter, chopped beef, minced chicken or lamb, ground nuts, or cream cheese and a lettuce leaf for the filling, with fruit, and a hard cooky or small piece of sweet chocolate to satisfy the desire for something sweet, make the best luncheon. Coffee, tea, pie, rich cake, cheap candy, and pickles should not be given. Variety makes the luncheon interesting and appetizing. Keep sandwiches moist by wrapping them in wax paper. Covered paper cups are excellent for holding salads or a baked custard or some fruit jelly. Milk, hot soup, cocoa, or malted milk when practical is sometimes a good addition to the sandwich luncheon.

1

Chopped Beef Sandwiches, with Lettuce
Apple Honey Cookies

2

Cream Cheese and Nut Sandwiches (Brown Bread)
Peach Butter Sandwiches Grapes

3

Raisin and Fig Paste Sandwiches
Apple Rice Pudding

4

Minced Chicken and Celery Sandwiches
Orange Sweet Chocolate

5

Peanut Butter Sandwiches (Graham Bread)
Marmalade Sandwiches Ripe Pear

6

Thin Corn Bread and Butter
Hot Malted Milk Apple Maple Sugar

FOR THE WOMAN AT HOME

The housekeeper alone at home, whose work does not take her beyond the limits of stove and ice-box, also faces the problem of a proper meal at noon. Here the difficulty lies, however, in lack of appetite rather than lack of good, available food. A monotonous morning, with little opportunity for refreshment in the open air, has robbed the body of its vitality, leaving one worn, but with no very keen desire for food. Neglect is easy. A cup of strong tea is hastily swallowed while standing, and the "dull-headachy" afternoon follows. Luncheon with a chair, a plate with a napkin under it, and a flower seems out of the question. There are, however, many quickly prepared food drinks, and other simple dishes calling for no more effort than the "tea and bread" luncheon, but supplying the body with just the right kind of attractive nourishment required. A list of such dishes kept on hand, so that the right food might be quickly prepared at the psychological moment, would double and triple the working value of the afternoons—and incidentally substitute happiness for headaches in many homes.

1

Cheese Purée Toast
Sliced Tomato

2

French Omelet Buttered Roll
Fruit

3

Egg Lemonade
Raisin Bread and Butter

4

Iced Chocolate
Bran Wafers Peaches

TRAY SUPPERS

For the Porch or Fireside

1

Sweetbread Salad Sandwich Rolls
Orangeade Fruit Jumbles

2

Tomato Bisque in Cups
Oatmeal-Cheese Biscuit
Stuffed Dates or Nut Brittle

3

Assorted Sandwiches, with Lettuce
Cantaloupe or Frozen Peaches
Corn Cup Cakes

4

Marmalade Nut Bread Sandwiches
Iced Chocolate

5

Peanut Scones Calico Salad
Hot Cocoa

6

Banana Salad Buttered Graham Rolls
Currant Punch Cup Cakes

7

Assorted Sandwiches
Lemon Milk Sherbet Sponge Cake

8

Oatmeal Crackers or Whole Wheat Bread, Milk
Sliced Peaches or Baked Apples

GOOD DINNERS FOR LATE SUMMER

When the Garden Is Overburdened with Its Treasure

1

Chilled Cantaloupe
Stuffed Peppers, Cream Sauce Corn
Garden Salad, Russian Dressing
New Apple Cake Cheese

2

Cream of Lettuce Soup
Creole Omelet Corn-on-the-Cob
Orchard Salad
Apple Sauce Cake Fruit Punch

3

Tomato and Cucumber Cocktail
Trench Succotash Potato Bread
Peaches Fruit Cookies

4

Corn-cut-from-the-Cob
Cold Boiled Lobster
Sliced Tomatoes, Chicory, Mayonnaise
Steamed Blackberry Dumpling Coffee

5

Spinach, with Diced Carrots
String Beans, with Chipped Beef
Potatoes in Their Jackets
Green Plum Cake

6

Cream of Cauliflower Soup
Tomatoes, with Crabflakes, Mayonnaise
War Bread Butter
Pears, Delicious

COLD-WEATHER "SOUP MEALS"

When we are looking for some one dish that will, at a minimum cost, both nourish and please, the thick soup or broth offers many possibilities, and the knowledge of its proper making and use is a valued asset. In the large family, where the necessary generous providing furnished meat trimmings, vegetable water, and interesting left-overs in abundance, it is frequently possible to put together a real soup without going to one's purse for assistance. Briefly, to get the best out of your soup-pot, utilize all food bits that are clean and wholesome, cook the soup by some method that will use as little fuel as possible, and serve it with an ingenious accompaniment so that all the required food elements may be properly represented. Ground smoked meat, or a sliced sausage or hard-cooked egg, with a garnish of dry toast, will add flavor, attractiveness, and still more nourishment to the dried pea and bean soups. The food value of the cream vegetable soups is increased if the water in which the vegetables have been cooked is consistently used in combination with the milk and the chopped or strained vegetable itself. If a spoonful of whipped cream, when such a luxury is available, is added to each portion, or, for variety, a slice of toast with melted cheese, or toasted cheese crackers, the soup at once becomes a better food. Rolls or crackers made of coarse flour, served with a cheese or nut soup, break the concentration and blandness of these dishes. As a rule, small, warm, hard rolls, breadsticks, or toast are more appetizing with soup than cold sliced bread.

APPROPRIATE FOR DINNER, LUNCHEON OR SUPPER, ACCORDING TO THE NEEDS OF YOUR FAMILY

1

Cheese Purée
Graham Gems Butter
Tomato Jelly Salad, with Cabbage
Baked Apple Dumplings

2

Black Bean Soup Pulled Bread
Celery and Apple Salad
Steamed Fig Pudding, Foamy Sauce

3

Lentil-Sausage Soup
Rye Rolls Butter
Orange and Date Salad
Pumpkin Custard Coffee

4

Fish Chowder
Pilot Crackers Butter
Escarole Salad Cottage Cheese
Maple Custards Oatmeal Cookies

5

Chicken Curry Soup
Shamrock Rolls Butter
Beet and String Bean Salad
Corn Waffles Maple Syrup Coffee

6

Spinach, Marmite Corn-Wheat Rolls
Potato, Cress, and Egg Salad
Quince Tapioca, Ice Cream Sauce

Some Spring Dinners

1

Cream of Cucumber Soup
Shad, Creole New Potatoes
Green Onions and Radishes
Popover Puddings, Strawberry Sauce

2

Potato and Onion Bisque
Broiled Squab Asparagus
Spring Salad Anchovy Toast
Rhubarb Pudding Coffee

3

Panned Chicken
Rice Bermuda Onions
Dandelion Salad Wafers
Maple Ice Cream Lace Cookies

4

Spinach Beauregard Cold Sliced Tongue
Parsley Potatoes
Pineapple-Strawberry Shortcake

Ready-made Company Luncheons

1

Italian Spaghetti, or Welsh Rarebit
Lettuce Salad, French Dressing Wafers
Grape Juice Punch Fig Cookies

2

Tomato Bisque Croûtons
Sliced Tongue Asparagus Tip Salad
Wafers Cheese Balls Jam
Iced Chocolate Sugar Cookies

"VERY EASY" DINNERS

For the Small Family without Help

1

Oven Panned Smelts Baked Potatoes
Romaine and Bermuda Onion Salad
Dates Oatmeal Wafers Orangeade

2

Spinach, Scrambled Eggs, Mushroom Garnish
Rye Meal Biscuit Butter
Fruit Hot Tea

3

Turkey Rice Soup, with Celery
Hominy Popovers Butter
Pineapple Salad

4

Cheese Rarebit Toast
Shredded Cabbage Salad, Tomato Garnish
Banana Charlotte

5

Creamed Scallops and Shrimps
Lettuce Salad, Russian Dressing Rolls
Dutch Coffee Ring Hot Coffee

6

Creole Fish Chowder
Corn Muffins Butter
Prunes, with Chopped Nuts Cream

7

Broiled Chicken
Green Peas Bananas, Southern Style
Fruit Liberty Cake

FESTIVE MENUS

Patriotically, we know that it is our duty to be wise and economical in the expenditure of every material resource, as well as of our own time and energy; but, patriotically, is it not also our duty to put just as much fermenting joy into the world now as we possibly can? Home fun and parties there must be of some kind—or the normal balance of living would be destroyed; whatever refreshments are served, however, should be planned with the utmost judgment, and made to take the place, whenever practical, of one of the regular meals, so that a "fourth" meal shall not be served.

For the Picnic Lunch

1

Egg, Olive, and Lettuce Sandwiches
Fruit Come Again Cake

2

Rye Tea Biscuit Sandwiches
(with minced-ham and cress filling)
Lace Cookies Lemonade Ripe Bananas

3

Cold Roasted Chicken
Olives Green Onions
Buttered Corn-Wheat Rolls
Sponge Cake, with Fresh Strawberry Filling

4

Grilled Bacon Whole Wheat Bread
Fig Rolls Hot Coffee
Fruit

For Winter Holiday Evening Parties

1

Hot Chicken Broth in Cups
Minced Celery and Pimento Sandwiches
Chocolate Ice Cream Sponge Cake

2

Débutante Salad Graham Bread Sandwiches
Frozen Rice Pudding, Strawberry Sauce
Assorted Cookies

3

Cress Sandwiches, Russian Mayonnaise
Hot Cocoa Corn Cup Cakes

4

Cottage Cheese and Olive Sandwiches
Apricot Jam Sandwiches, Nut Bread
Grape Juice Punch

5

Oysters and Shrimps in the Chafing-dish
Olive Sandwiches (Whole Wheat Bread)
Hot Coffee Little Raisin Cakes

6

Turkey Salad
Buttered Oatmeal Rolls
Pineapple Sherbet

7

Chicken Toast Patties
Cress Sandwiches
Nut Kisses Heart Cookies
Currant Lemonade

8

Apple and Celery Salad, Cream Mayonnaise
Peanut Biscuit Sandwiches
Orange Ice
Lace Cookies Sponge Cake

"My America" Christmas Dinners

1

Tomato Bouillon in Cups
Rye Breadsticks
Roast Duck, Hominy Stuffing
Spinach Apple Sauce
Conservation Plum Pudding
Ginger Punch

2

Fruit Cocktail
Roast Turkey
Potato Puffs Creamed Onions
Celery Quince Jelly
Mince Tarts
Coffee

3

Fish in Aspic, Tartar Sauce
Broiled Guinea-hens Sweet Potatoes
Elderberry Jelly
Lettuce and Apple Salad
Frozen Rice Pudding
Fruit
Coffee Mints

The Thanksgiving Dinner

1

Cream of Spinach Soup, Croûtons
Chicken Casserole, with Vegetables
Spiced Windfalls Candied Sweet Potatoes
Thanksgiving Pudding

2

Rabbit Fricassee
Browned Hominy Squares Grape Jam
Celery and Lettuce Salad
Cheese Wafers
Meatless Mince Pie

3

Halves of Grapefruit
Roast Turkey Bananas, Southern Style
Black Currant Jelly Curled Celery
Cheese
Ginger Fruit Tarts
Coffee

Reception Menu

FOR THE SMALL HOME WEDDING

Chicken Salad Sandwiches
Ripe Olive Sandwiches
Wild Strawberry Ice Cream
Cocoanut Kisses
Bride's Cake
Fruit Punch

A Pansy Luncheon

Grapefruit Cocktail
Panned Chicken
New Peas and Tiny Currants
Small Fresh Rolls
Olives Grape Jelly
Frozen Bananas, Orange Sauce
Little Cakes
Coffee

For this luncheon, make the most of the pansies in all their variegated loveliness—white, purple, brown, yellow—and let no other color but a background of green and white mar the sunshiny-gold and purple-lavender sweetness of your table. Cover the table with a pure white cloth, use small white tea-napkins, green-and-white or white-and-gold china, and place a small, low, white-enameled basket filled with pansies and maidenhair in the center. Additional small baskets, similar in design, may be filled with white cream mints, topped with a pansy, tied with a lavender ribbon, and used as individual favors.

REFERENCES:

The Food Problem, Kellogg and Taylor.
"Ten Lessons on Food Conservation," Special Bulletin, United States Food Administration.
Feeding the Family, Mary Swartz Rose.
Every Day Menu Book, Sarah Tyson Rorer.
New Cook Book, Sarah Tyson Rorer.
Lessons in Food Values and Economical Menus, Alice Bradley.
The Cost of Food, Third Edition, Ellen H. Richards.
Food and Flavor, Henry T. Finck.
"Planning and Serving Meals," Home Economics Bulletin, Iowa State College, Ames, Iowa.
"Food for School Boys and Girls," Mary Swartz Rose, Bulletin No. 23, Teachers College, New York, N. Y.
"How to Select Foods," Farmers' Bulletin 808.
"How to Select Foods," Farmers' Bulletin 817.
"How to Select Foods," Farmers' Bulletin 824.
"Food for Young Children," Farmers' Bulletin 717.
"School Lunches," Farmers' Bulletin 712.

NOTE.—The above, as well as other valuable food bulletins, may be obtained free of cost, or for a nominal sum, by addressing the Division of Publications, or the Superintendent of Documents at the Government Printing Office, United States Department of Agriculture, Washington, D. C.

Foods and Their Adulteration, Third Edition, Harvey W. Wiley.

See also references listed at close of Chapters III and IV.

VII

COOKING THE MEALS

If women are once more to become home-makers . . . we must put it within the strength and ability of the average woman to do the work of her home happily and comfortably.—*The Craftsman Magazine.*

ND next we are faced with the work of preparing these meals so carefully planned. And it is here, in front of the kitchen stove, where so many lose their faith, their hope—and falter—for the days do come when it is hard, very hard, to make our cabbages look like roses; when it is hard to grip, and "keep your grip." These are the days when we must say, with the old philosopher, "This, too, shall pass," and begin again.

Because its repetition is so consistent, and so endless, cooking forms the biggest part of all household work, and since approximately only six per cent. of the twenty-two million homes in America have outside assistance, the problem is

necessarily one that affects the personal daily life of the great majority of housekeepers.

Preparing the meal for a family is something which may take an hour or two out of the day, or it may take all day. It depends so much on what we know, what kind of a philosophy we may have, and how we organize our knowledge and apply the philosophy. A good cook is one who spends little time in the kitchen, yet, through some magic management, serves very perfect meals. While the size of a family is an important factor to be reckoned with, and may materially increase or decrease the time required for certain detail operations in connection with the cooking and serving of meals, it should not affect to any great degree the time required for preparing the food for the day as a whole. Although the accomplishment which combines good cooking with little effort calls for both training and clear, reasonable thinking, the results are so gratifying, have come to be so important to the world, and are, from every point of view, so liberating that they are worth striving for.

We cook our food because, broadly, it is necessary to do so.

> Cooking makes many foods more digestible—such as starchy foods, cereals, many vegetables, some fruits, and the connective tissue of meat.

Cooking develops or modifies flavor, making many foods more palatable, and makes increased variety and attractiveness, as well as many economies in the use of food, possible.

Cooking is a means of sterilizing food, when this is desirable or necessary.

Different methods of cooking are commonly practised—boiling, stewing, steaming, toasting, broiling, roasting, braising, baking, panning, sautéing, frying—all of which serve many good ends in the preparation of food, although certain methods of cooking are better for some foods than others. *To make food more wholesome and more acceptable is the principle underlying all good cooking.* Any method that will accomplish this end without food waste, retaining as far as possible all the original nutrients in the food, is a good method; other factors being equal, that requiring the least effort and time, combined with fuel economy, is always the better method, while food that is good without cooking is usually best served in that way—except where variety may be particularly needed, or where cooking may prevent food waste.

Cooking is a necessary, profitable, and ennobling occupation up to the point of making food more wholesome and more acceptable. Beyond this, when it reaches the point of spending

the better part of the day converting clean, honest food into complicated, over-elaborated dishes, which are neither wholesome nor digestible and are carelessly eaten in a few minutes, it is hardly profitable. When practised to the exclusion or neglect of other necessary thought and work—sacrificing, as it can, home happiness, health, even the wealth of the country—it is enslaving, and very rapidly deteriorates into that drudgery which many believe is its true and only rôle. In order to cook so that the work is a great health and happiness giving service, so that it enriches and does not exhaust, it must be understood and organized in the mind just as home-making as a whole must be understood and organized. Only in this way can cooking be reduced and simplified without sacrificing the pleasures of a delightful table to which every one is entitled, and without which life would mean very little, or paying for our freedom through the purchase of expensive food materials requiring little or no troublesome preparation to make them wholesome and palatable.

The essentials of good, attractive, economical and easily managed cooking include:

1. A knowledge of food materials, which covers:

   The chemical composition and digestibility of different foods, both raw and cooked.

The effect of heat, and varying degrees of heat, on different food principles and foods, as to digestibility, form, appearance, flavor.

2. A knowledge of cooking methods, which covers:

The best, simplest, and quickest methods of preparing foods previous to cooking.

Example: Washing potatoes and cooking them without paring saves time, waste, and is desirable from a health standpoint.

The processes of cooking, or practical methods of applying heat—boiling, baking, broiling, etc. —with ability to quickly determine which methods, under certain conditions, will produce the best results with the least effort, in the least time, and with the greatest fuel economy.

Standardization of cooking temperatures as far as practical; use of a thermometer, rather than variable, practical tests to determine temperatures most desirable for cooking certain foods, or for obtaining certain desired results; this insures repeated successes, uniform results, and saves anxiety as well as wasted effort and food materials.

Examples: Use an oven thermometer or indicator when baking; note what temperature produces best results —for bread, cake, rolls, etc.—and have oven heated to this temperature when baking.

Use a candy thermometer for syrups, candy-making, and boiled frostings.

Use a thermometer—one registering as high as four hundred degrees Fahrenheit—for testing deep fat for frying.[1]

Best methods of combining different materials, with a ready understanding of the effect of one ingredient on another, including resourcefulness in substituting one material for another according to need, economy or convenience, or desire.

Example: Such as the use of sour milk and baking-soda in place of sweet milk and baking-powder, or chicken fat in place of butter, or rye flour in place of wheat, etc.

Accuracy in measuring ingredients, use of measuring cups and spoons, and some knowledge of proportions.

Example: Two level tablespoonfuls fat, two level teaspoonfuls flour, and one cupful liquid is the rule for a good sauce; the fat used may vary according to convenience or desire, and the liquid according to flavor desired —the proportions remain the same.

[1] See "Some Attempts to Standardize Oven Temperatures," M. B. Van Arsdale, Teachers College, New York, N. Y.
Also, *New Cook Book*, Mrs. S. T. Rorer.
Also, *Boston Cooking-School Cook Book*, F. M. Farmer.

Appreciation of types of cooking utensils best fitted for preparing or cooking certain foods.

Examples: The use of glass baking-dishes to insure a brown undercrust for pastry or biscuits.

For efficient results, mixing-bowls should be conical in shape, not flat on the bottom.

The use of wooden spoons for mixing and stirring.

3. Efficient working conditions:

These cover:

A well-planned, convenient, inspiring kitchen.

Equipment and tools or cooking utensils that will facilitate work and save all unnecessary labor.

A comfortable, washable, becoming kitchen uniform, including a cap, white stockings, and well-fitting, good-looking, low-heeled shoes.

Every woman in the country is entitled to the best kitchen equipment and uniform that the work of her particular household demands. Any system of living that does not make this possible is unfair in the extreme; where the income of a home cannot afford right working conditions for the housekeeper, these should be provided for, in some way, by the state or community.

4. Elimination of all unnecessary, elaborate cooking.

5. Simplification of all necessary cooking, making as little work of this as possible, and keeping this work under control. The following suggestions, put into practice, can be most helpful:

Have menus planned in advance; let these include frequent "one-dish" and "two-course" meals,[1] also include dishes requiring little or no cooking—fresh fruits, raisins, dates, figs, nuts, milk, cocoa, chocolate, cheese, salads, egg dishes, fish dishes, cream soups, sandwiches, gelatin, and frozen desserts.

Plan an adaptable schedule of work fitted to particular home conditions, with greatly reduced work for Sundays, holidays, hot weather.[1] Plan "cookless" meals for these days; "picnics" and "tray-suppers" save work and give pleasure.

Do all kitchen work as far as possible before 9 A.M.

When cooking cereals, beans, vegetables, etc., cook enough at one time to cover several meals; serve in different forms.

Use a fireless cooker for overnight cooking: cereals, beans, vegetables, stewed fruits, stews, a fowl or other piece of meat, may all be prepared in this way, when convenient, and much time and work during the day will be saved.

[1] See "Hot Weather Cooking Suggestions," on p. 253. Also, "Fuel-saving Menus," on pp. 93–94.

"Oven dinners," "two-story" steamer dinners, the baking of breads and cakes in small pans—all save time and fuel.

An "emergency cupboard," stocked with ready-to-eat foods, frequently saves time and confusion.

Form, arrangement, color, flavor, count high in food satisfaction, but cost little in time and money.

Reliable "rules," "tables," and "foundation recipes" are more convenient and helpful than a confused mass of scattered, individual recipes. A good cook-book or set of recipes may be used as a guide or reference, but it is more efficient to work without constantly referring to a recipe.

Enlist the co-operation of other members of the family.

Fuels used for cooking include wood, coal, coke, kerosene oil, gas, electricity, and, for small quantity, cooking alcohol. While the use of coal may still be necessary in some localities, the coal stove or range for home cooking represents economy in neither fuel nor labor. The proportion of coal used for generating the heat required for family cooking is extravagant, much of this heat is wasted, and the care of the stove is a burden. Gas, oil, and electricity are now the practical

and popular fuels, with the latter, particularly, promising still further economy, relief, and satisfaction for the future. The great needs of the present—conservation of our national resources and freedom for the housekeeper—are definitely recognized in the construction of all the newer stoves in which these fuels are burned.

These stoves have all been so perfected, including automatic operation in clever combination with fireless ovens, with all unnecessary heat radiation carefully controlled, that cooking may be facilitated to a remarkable degree, and fuel economy correspondingly increased. At the same time, all quick-cooking methods—broiling, boiling, frying—are perfectly provided for. These stoves are, in addition, so constructed and finished that care and cleaning amount to very little compared with the old "stove-polishing" days. Where fireless cooking is not otherwise provided for, a reliable one-, two-, or three-compartment cooker may stand, raised to a convenient height, near the range. Separate gas, oil, or coal water-heaters, operating at low cost, and in cases automatically, will supply the needed hot water.

Since the use of more than one fuel is practicable in almost all localities, and since each fuel may have certain advantages under certain conditions, an intelligent combination of fuels suggests the most satisfactory solution of the cooking

problem for many homes. These fuel combinations may be:

Wood, coal, and gas.
Coal and gas.
Coal and oil.
Coal and electricity.
Oil and electricity.
Gas and electricity.

Local conditions and individual need or preference must determine the choice. With each one of these fuels or combinations some means of fireless cooking can be included, resulting in every possible cooking advantage:

A warm kitchen in winter.
A cool kitchen in summer.
An attractive kitchen at all times.
An abundant supply of hot water for the large family.
Some special convenience for the small family.
Some advantage for the housekeeper who is also a business woman outside the home.
All degrees of heat for all methods of cooking.
Always the maximum economy in fuel, time, and labor.

Where the use of coal is desirable, the two- or three-fuel ranges are practical. Either coal or wood, in combination with either gas or kerosene oil, may be burned in the one range, thus providing the needed heat for a cold kitchen in winter

without a corresponding disadvantage during the summer months. In cases, both fuels may be burned in the one range at the same time, furnishing increased cooking capacity without requiring increased floor space. Again, under some conditions, instead of investing in one stove of generous capacity that fulfils every cooking need, it may be more convenient, satisfactory, and economical to have two small stoves of distinctly different types. A small electric range with a generous oven, for both baking and broiling, and a one- or two-burner oil-stove, supplemented with a device or two for table cooking—perhaps a chafing-dish and a coffee-pot—may give the acme of cooking comfort and pleasure. A small gas hot-plate, with a first-class portable oven and an electric table stove or grill, suggests another combination possibility. For the country home, an out-of-door camp stove, or an old-fashioned stone fireplace in which surplus wood may be burned, may give much pleasure and be most profitable at the same time.

The advantages of fireless cooking must be neither undervalued nor overestimated. While the fireless cooker is a most useful device, and, intelligently handled, can accomplish much—conserving time, fuel, food—it should be used, more particularly, for those foods that would normally require long, slow cooking in covered containers,

and for other methods of cooking where convenience or necessity demands. Fireless cooking is really a method in itself, just as baking and broiling are methods. The principle of successful fireless cooking lies in the fact that sufficient heat, both in quantity and in degree, must be introduced, and retained until the food is thoroughly cooked. A small quantity of food only partially heated through, and placed in a large container in a cooker, will not hold sufficient heat to accomplish satisfactory cooking.

The all-metal box, aluminum lined, with aluminum containers, and insulated with mineral wool, is the most durable, and if properly handled should not rust, warp, or absorb odors. Very satisfactory small cookers may also be made at home.[1] Any reliable fireless cooker should give good service if the following points are observed:

Read carefully the descriptive circular and directions which accompany every good cooker.

Spend at least a week in learning how to use it. A certain amount of experimenting must be done before the best results can be obtained; reserve judgment until a cooker has been fairly tested.

Do not force its use, nor expect it to accomplish the impossible.

[1] Directions may be obtained from the United States Department of Agriculture.
See, also, Scott, *Home Labor-saving Devices*, p. 39.

Keep it scrupulously clean and dry at all times, and well aired when not in use. If the aluminum becomes discolored, clean with steel wool and a neutral soap.

While table cooking is always delightful, since the advent of electricity it is now also recognized as a thoroughly practical convenience for the woman who does her own work. It is of special advantage, perhaps, for the small family, for the housekeeper who is also a business woman outside the home, and for use on the eating-porch during hot weather. But here again, as in the case of the fireless cooker, this method of cooking should not be forced, and only quick-cooking foods attempted—such as eggs, cheese, fish, etc. For the summer evening dinner, a chafing-dish or small table-stove is also sometimes practical for reheating a stew or chowder that has been previously prepared early in the day.

Definite choice of any stove is controlled first of all, of course, by the kind of fuel that represents the greatest economy in the locality, and, second, by the number in family to be provided for. In addition to this, other considerations must be taken into account, and certain practical details checked before the wisest decision can always be made. There is, for example, the kitchen floor and wall space to be considered, the method of cooking preferred or most con-

venient, and the construction, material, and shape that will best satisfy the standards of a good stove and one's own esthetic need. Where more than one fuel offers itself, estimating comparative costs of operating different stoves, and balancing certain practical advantages in construction, or possible results, of one stove against another, under the particular home conditions in which it is to be used, can help one to come to a profitable conclusion. When installing a stove all connections and necessary adjustments should be properly made, when operating it the directions provided by the manufacturer should be observed, and a stove should receive such regular care as will keep it in good working order so that the maximum satisfaction and economy shall result.

Not until the right attitude toward kitchen work is generally adopted shall the food help that the world now needs from the homes of America be effectively and truly realized, and our own individual release at the same time come to pass. As we have been told over and over again, this help must come through organized knowledge and the ability to put that knowledge into practice. Whether, as housekeepers, we do the cooking ourselves or not, is no longer part of the question. Practical food and housekeeping knowledge is needed by every one of our twenty-two million housekeepers or the American home cannot

register as a positive stronghold in the crisis through which history is passing.

Unfortunately, however, it is not only this knowledge that is needed—the knowledge itself is, after all, not so difficult to acquire—*something must be done to make us want the knowledge needed.* Something must be done to make us think of the work done in our kitchens as also "one of the forces now operating, the sum of which is to set the world free." Something must be done to change the thought that kitchen work is drudgery, despised, to the truer thought that it can be more nearly like a holiday in fairy-land. There is a way, if we can only make the spirit go and find it.

REFERENCES:

See References at close of Chapters IV, V, VI, XI. Also,

Boston Cooking-School Cook Book, Fannie Merritt Farmer.
New Book of Cookery, Fannie Merritt Farmer.
Food and Cookery for the Sick, Fannie Merritt Farmer.
Key to Simple Cookery, Sarah Tyson Rorer.
Bread and Bread Making, Sarah Tyson Rorer.
New Salads, Sarah Tyson Rorer.
Vegetable Cookery and Meat Substitutes, Sarah Tyson Rorer.
Cooking for Two, Janey McKenzie Hill.
How to Cook and Why, Condit and Long.
"Ninety Tested, Palatable, Economical Recipes," Bulletin No. 34, Teachers College, New York, N. Y.

The Cook Book of Left-Overs, Clarke and Rulon.

The Corn Cook Book, Elizabeth O. Hiller.

Foods and Household Management, Kinne and Cooley.

"Some Attempts to Standardize Oven Temperatures," Bulletin No. 22, May B. Van Arsdale, Teachers College, New York, N. Y.

Economics of Electric Cooking, P. W. Gumaer, University of Missouri, Columbia, Mo.

The Chemistry of Cooking and Cleaning, Richards and Elliot.

Bacteria, Yeasts, Molds in the Home, H. W. Conn.

Farmers' Bulletins, published by Department of Home Economics, United States Department of Agriculture.

A list of valuable food and cookery bulletins—containing food facts, cooking instructions, and recipes—available for free distribution, or for a nominal sum, may be obtained by addressing the Division of Publications, United States Department of Agriculture, Washington, D. C.

American Cookery, Boston Cooking School Magazine Company, Boston, Mass.

Particularly valuable for its illustrations and excellent up-to-date recipes.

Special and emergency recipes, as required, covering foods to be used or spared by the country, may always be obtained from:

The United States Food Administration, Washington, D. C.

The United States Department of Agriculture, Washington, D. C.

The State Agricultural Colleges.

See, also, References listed at close of Chapter III.

VIII

SERVING THE MEALS

To simplify is often to beautify. To rid modern life of its knickknacks is to make room for those things which are necessary and beautiful.—Mrs. Havelock Ellis.

GOOD service means attractive, happy service—that is all! Since the pleasure food can give is a very real part of the benefit it holds, good service is as essential as good cooking. The appearance of a dish, its flavor, the way it is placed upon the table, are quite as important, in many ways, as the actual nourishment which that dish may contain. In other words, unless one eats with appetite and relish, unless things "look good—and taste good," one does not get full value from the food served, nor for the time and money spent on it. At the present time, it is, moreover, particularly important that all food cooked and served should be palatable and attractive, so that it will be eaten and not left on the plate to be thrown away, which is only food waste in another form.

Just how good service shall be accomplished in the home depends largely upon ideals and standards, as well as practical conditions, of living. There are, briefly, two kinds of service—formal and informal. Where the desire for the former exists, and can be satisfied in the right way—with properly recognized professional service—there is really no service problem, all details of table arrangement and dining-room service being largely a matter of individual taste or preference and accepted convenience.

Since, however, the majority of housekeepers must serve a meal as well as cook it, and eat, and entertain, and clear it all away again—almost in the same breath—this final phase of our food problem remains to be solved in some practical, happy, informal way. How to do it without making a slave of some member of the family is again the question, and again it is a question that must be solved step by step—in some orderly fashion.

Serving a meal includes:

Arranging the dining-table.
Carrying food from kitchen to table.
Serving at the table.
Clearing the table.
Dish-washing.

These are the steps to be approached and simplified, reduced to their very lowest terms, as

it were. Taken as a whole, this may be accomplished to a very great degree by:

1. Simplifying menus, as previously suggested; that is, reducing the number of courses served, and consequently the number of utensils and dishes used, to be carried back and forth, and to be washed and put away again. In this connection, let us not forget the following types of meals, which are always delightful and becoming more popular as their practical value is appreciated:

   "Kitchen alcove" breakfasts.
   "One dish" luncheons.
   "Two-course" dinners.
   "Tray-suppers" for the porch or fireside.
   "Picnic-basket" meals.

2. Reducing dining-room and table appointments to a minimum, and placing on the table only dishes and food that give one pleasure to look at, handle, or eat. Beauty has a wonderful way of reducing labor and neutralizing fatigue. Perhaps this is a subtle point to make, but we have only to experiment to know that it is so.

   A sprig of fresh parsley here, a slice of lemon there, the radish rose, the olive, the bit of pimento, and the table will have a crispness and a sparkle and a lightness that seem to dissipate any work there may be in caring for it. Even the paper doily under the baked custards, the leaf in the finger-bowl, the flower in the center of the table have a drudgery-reducing value all their own.

Perhaps the most practicable and at the same time the most artistic and attractive table itself is the plain, painted table—in cream-white or black—waxed to a polish, and arranged with very little or even no linen, and as few dishes and pieces of silver as possible. Such a table is easily washed with soap and water, it can be kept immaculate with very little effort, there is little linen to fold, put away, launder, and the table itself furnishes the very loveliest background for flowers of any kind and whatever cheerful, gaily colored pottery china we may choose to have.

Small pieces of linen—which does not mean innumerable small doilies—are always more practical than the large table-cloth with its accompanying heavy, padded under-cloth, always a trouble to fold, wash, and care for. For the average table, a small linen piece in the center, or a narrow runner, with little tea-napkins to match, is all the linen required. The unbleached crash linens and the Japanese crêpe towelings are best for this purpose, and most attractive pieces can be made very quickly at very little expense. Paper doilies and napkins may be substituted for linen, if desired; while these may not be as attractive as the linen, they are worth considering where the laundry problem is at all troublesome.

Flat silver free from unnecessary ornamentation is the most comfortable to handle, looks best on the table, and is the easiest to keep clean.

Do not have one service for "every day" and another for "company" and "Sundays." This

complicates matters, and the idea is not sound. Let us live as happily as we can—always—according to our means and standards, and then that which is good enough for our own family is surely good enough for others.

3. Checking kitchen convenience in relation to the dining-room—how many steps from stove to table? from sink to table? from dresser with dishes and silver to table?

   Narrow, open, painted shelves for the china, with hooks for cups and pitchers, are more practical than the deep closet, or a dresser with doors. These shelves should be located in convenient relation to both the sink where the dish-washing is done and the dining-room table.

4. Making use of all practical step- and labor-saving devices:

   A "tray-wagon" or a "wheel-tray," on rolling casters or small wheels, also finished in a hard enamel paint, and complete with a series of shelves, including one sliding shelf or drawer—with partitions—for holding all flat silver in constant use, will further simplify service and make every meal comfortable for every member of the family. If such an "assistant" is cleverly used, it is easily possible to serve an entire meal without any one leaving the table at any time. This tray should have a permanent place in the kitchen near both stove and sink, so that it can be of equal service for carrying food from the stove to the table, as well as soiled dishes from the table to the sink.

The many interesting glass and earthen baking-dishes which meet every requirement of perfect cooking and perfect service suggest another means of saving labor, for the one dish "both cooks and serves."

Paper dishes are practical at times. When purchased by the gross from a wholesale paper-goods concern they are much less expensive than when purchased by the dozen in a department store.

Cooking at the table is another happy thought. An electric chafing-dish, coffee-pot, toaster, or one of the fascinating "table-stoves" can save many steps and will take good care of the small family.

The picnic-basket—fortified with an alcohol-kettle or a vacuum bottle—might be used much more frequently than it is. Instead of closing the eyes to the sunshine and the flowers as a sterner conscience whispers "dinner," why not spread a cloth under the protecting branches of an apple-tree just bursting into bloom, and invite family and friends to a meal in fairy-land? Every one will be the better and happier for such a treat. Call it an apple-blossom party if you will, and have one on the first warm day when the blossoms open, and another the next, and still another before the blossoms fall.

5. Enlisting the interested co-operation of all members of the family.

By taking turns in caring for the table, children can be taught housekeeping, as well as service for others, in a happy, practical, wholesome way.

PICNICS SAVE WORK AND GIVE PLEASURE

5. Organizing some effective method of caring for the dish-washing problem, as follows:

Eliminate as much dish-washing as possible by simplifying meals and service, as suggested.

Install proper dish-washing equipment:

A large, white-enameled or porcelain sink—installed at the proper height, near a window with a pleasant outlook—and running hot water in abundance are the first requisites of simplified dish-washing.

The following small equipment kept near the sink, in some orderly arrangement, will further simplify the work:

Porcelain jar for soap-powder.
Porcelain jar for soda.
Ammonia.
Reliable friction cleanser.
Steel wool for cleaning aluminum, etc.
Faucet soap-dish, with neutral soap.
Copper dish-mop.
Copper dish-cloth.
Sink strainer.
Bottle-brush.
Utility brush.
Cork knife-cleaner.
Small emery-stone.
White fiber tray.
Dish-drainer.
Dish-pan.
Small enameled garbage-can.
Crash dish-towels.

Linen glass-towels.
Paper towels.
Hand-brush.
Lemon and cold-cream for the hands.

For the large family, the dish-washing machine is already demonstrating its usefulness, and greatly improved types are on the market or under construction. A machine must be selected with care and judgment, however. One operated by electricity, where this is available, is, of course, preferable to one operated by hand. Any machine selected and used should be simple in construction so that care and cleaning are easy, should be durable, should not occupy unnecessary floor space, and should be so constructed that it can be permanently connected with water-supply and disposal pipes.

For the small family, and in the home where hot water is abundant, dishes can sometimes be very quickly washed by placing them in a deep wire rack or dish-drainer, sprinkling them with soap-powder, and allowing scalding water from the faucet to run over and through them. The drainer may then be lifted from the sink, placed on the drain board, and the dishes allowed to stand until dry.

Work in an orderly manner:

Just what routine is best followed must be decided by each individual housekeeper. So long as the work is done quickly and well, the exact process matters little. Much time is saved, and

it is usually more sanitary, if dishes are allowed to dry by draining. Dishes should always be carefully scraped, or wiped with paper, before washing; this is particularly important in connection with greasy dishes or pans.

Our country as an industrial art center is developing rapidly. In every phase of living, public taste is demanding the artistic as well as the practical. Useful household articles of every kind, from the pots and kettles hanging in our kitchens to the fixtures in the bathroom, are now chosen for line, form, color, as well as for general usefulness, wearing qualities, and other practical advantages. In no field, however, has the American producer of household requisites assembled greater talent than in the manufacture of furnishings and equipment for the dining-room and table. Artists with a real message for the world are now designing our everyday knives and forks and spoons, our dinner-plates and teapots, the glass from which we drink our water, the linen on the table. Everything we handle, in this connection, can be a source of rest and inspiration. Every moment spent in the preparation and serving of meals should be one of the brightest spots in life, one very real thing that relieves and balances the struggle to live. That it is not, is one of the saddest facts in the history of the world at this time. Knowledge, well-ordered, is suggested over and

over again as a remedy—and it is the only practical remedy to offer. But all the knowledge, all the theories, all the order in the world can never entirely remedy matters unless we ourselves can and will see household service stripped of its drudgery and revealed in its true light.

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For practical instructions and helpful suggestions in the serving of meals, the following publications will be found of value:

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The Expert Waitress, Anne F. Springsteed.
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A Text Book of Cooking, Charlotte C. Greer. (See Part II, chapter on Dining-room Service.)
Journal of Home Economics, American Home Economics Association, Baltimore, Md. (Special articles.)

See, also, References listed at close of Chapter III.

IX

YOUR RECIPES

THE value of a recipe depends upon its fundamental reliability, its completeness, its adaptability, and the accuracy and judgment with which it is followed. The majority of foods may be prepared, and a number of wholesome, interesting dishes made from a few standard rules or recipes, variety being easily obtained by changing flavor, seasoning, form, or method of service, or substituting one equivalent material or ingredient for another. While a practical recipe properly used should and *does* go far toward simplifying cooking and insuring good results, the fewer recipes we have the better off we really are; in mere accumulation there is more burden than virtue.

Every recipe used and kept should fill some definite purpose, either serving as a "foundation" for many dishes or meeting some special need. From the one recipe for wheat tea biscuit, for

example, we should be able to make rye biscuit, drop biscuit, barley scones, cheese biscuit, graham biscuit, shortcakes, quick coffee-cake, etc., by simply supplying the necessary variation or addition, or substituting one material for another. In the same way, from a recipe for cream of spinach soup we should be able to make any cream vegetable soup—cucumber, carrot, lettuce, etc.—the vegetable varying, that is all—and perhaps the bowl in which we choose to serve it.

The ideal recipe, one that is worth keeping and using, should not only be correct as to the proportions and amounts of the ingredients used in the making of the dish, and explicit in directions for treating or combining these ingredients, it should state, in addition, as far as practical:

Time required for preparation.
Time required for cooking.
Most desirable cooking temperature.
How to serve it.
Number served.
At what meal served.
With what other foods it is best served.
Wholesomeness or digestibility.
Keeping qualities.
How it may be varied or adapted.
Approximate cost.
Special caution, if any.

But, we must not overlook the fact, further, that at best any recipe is only a guide. No matter how reliable and complete a recipe may be in itself, food materials are ever variable, and, very frequently, conditions under which the work is done, therefore the ultimate success and final value of a dish depends not only upon our ability to follow specific directions, but to judge materials and conditions, and make such adjustments as may be called for at the moment. One-third of a cupful of liquid to one cupful of flour may be the theoretically correct proportion for making ideal biscuits, and we may measure these proportions accurately, but the result may not be as anticipated, or guaranteed by the recipe, because we fail to note some difference in the flour which should have called for some corresponding change in the amount of liquid used—possibly a little more or a little less.

This matter of judgment is particularly important, too, in connection with oven temperatures when baking. The size of a loaf of bread or cake, the shape of the pan, even, at times, the particular oven or fuel in use, can materially affect the temperature at which the baking should be done. The best way to insure success is to study one's own oven—one with a glass door will simplify matters very much—use an indicator, and note temperatures and results in connection

with the baking of certain foods under certain conditions.[1]

Every housekeeper should be equipped with a standard cook-book [2] for general cooking instructions and such special recipes as may be required from time to time. A reliable book on cookery for the sick is also desirable. In addition to this, cooking for a family can be greatly simplified if a housekeeper has a special, compact set of recipes of her very own, selected and arranged to meet the needs of her particular household. These recipes should be printed or written on small cards, and filed, carefully indexed—ready for instant use—in a small card-catalogue box kept on or near the work-table in the kitchen. This cabinet method of keeping recipes is not only a convenience for the housekeeper, and an inspiration for the school-girl just learning to cook, but a recognized system now adopted in schools and colleges where cooking is taught.

The following assembled recipes [3] suggest what might be included in such a set. While these recipes, like the menus in Chapter VI, have been selected because of their food satisfaction, both

[1] See "Some Attempts to Standardize Oven Temperatures," Bulletin 22, May B. Van Arsdale, Teachers College, New York, N. Y.

[2] See books listed at close of chaps. vi and vii.

[3] These are largely standard recipes adapted to present needs.

in wholesomeness and attractiveness, as well as economy in the use of food materials and time required for preparation, they are offered here as sample suggestions only.[1] They may be revised or adapted to meet special needs, or they may serve as a model or inspiration for arranging other "sets." The recipes as given have all been thoroughly tested, and may be depended upon for good results if followed with care and judgment. All measurements are level, and one cupful equals one-half pint; measuring-cups and standard tea- and table-spoons should be used for measuring.

[1] See, also, chap. xii, p. 238.

WHOLESOME BREADS

Made from a Variety of Flours

Where much baking is done, a set of "rules," or a "table of proportions," clearly printed on a card, which can be slipped into a little celluloid case, or even framed, is most convenient. The Quick Bread table printed on the following page is particularly practical, and illustrates this point. From this one table almost any variety of quick bread may be made —from tea-biscuits down to popovers, including muffins, waffles, griddle-cakes. Variety is obtained by using different flours, changing the amount or kind of shortening, and sometimes the pan in which the baking is done. With the exception of the last two, which are of another type, the recipes which follow are based, largely, on these same proportions, but suggest interesting developments.

TABLE OF SIMPLE, QUICK BREAKFAST BREADS

Name	Flour	Salt	Baking-powder	Sugar	Fat	Eggs	Milk	Combining	Time
Milk Biscuit	2 cups	½ teasp.	4 teasp.		1 to 3 tbsp.		⅔ cup, about	Mix dry ingre. Rub in fat; add milk. Shape; cut	Bake in hot oven 20 min.
Muffins	2 cups	½ teasp.	4 teasp.	1 or 2 tbsp.	1 to 3 tbsp. melted	1 or 2	1 cup, about	Mix dry ingre. Beat eggs; add milk; combine. Add fat	Bake 25 min.
Waffles	2 cups	½ teasp.	4 teasp.	1 tbsp.	2 to 3 tbsp. melted	2 beaten separately	1⅓ cup, about	Mix dry ingre. Beat eggs; add milk; combine. Add fat	Bake on greased or aluminum iron
Griddle-cakes	2 cups	½ teasp.	4 teasp.	2 tbsp.	1 to 2 tbsp. melted	1 or 2	1½ cup, about	Mix dry ingre. Beat eggs; add milk; combine. Add fat	Bake on greased or aluminum iron
Pop-overs	2 cups	½ teasp.				2, 3, 4, 5, or 6	2 cups, scant	Beat eggs without separating; add salt, flour, milk; beat	Bake in hot greased cups 40 to 45 min.

Note.—All measurements are *level*. Flour is sifted before measuring. A measuring-cup is used. *Exact* amount of liquid used depends upon quality of flour; here judgment is required. Variety may be had by changing flour used; white, whole wheat, graham, rye, corn, etc. *Cereal muffins* or cakes are made by adding about three-fourths cupful cooked cereal to above proportions. *Fruit biscuits and muffins* are made by adding one cupful raisins or other suitable fruit to above proportions. Recipes as given will serve six persons, about.

Sour milk and soda may be substituted for sweet milk and baking-powder. Allow one-half level teaspoonful baking-soda to one cupful thick sour milk; if milk is only slightly sour, use less soda, and half amount of baking-powder called for in the recipe. Example, see recipe entitled "Little Dandy Gems."

Corn Bread

Ingredients

2½ cupfuls soft cornmeal
¾ level teaspoonful salt
2 cupfuls thick sour milk
1 level teaspoonful baking-soda
2 level tablespoonfuls melted fat

TIME: Preparation, 8 minutes; baking, 30 minutes
NUMBER SERVED: 6 persons

MIX salt and meal. Put milk into a bowl, add soda—dissolved in spoonful water; mix. Add this to meal, add melted shortening, mix well. Pour into a greased, shallow pan; bake in a moderately hot oven (about 370° F.) until a rich golden brown. Serve fresh for breakfast or supper, with milk or cocoa or fruit.

For variety, two beaten eggs may be added, and two cupfuls cornmeal mixed with one-half cupful rye or wheat flour used in place of all meal. If milk is not very sour, use a little less soda, and add two level teaspoonfuls baking-powder to the batter. Fat may be omitted.

Quick Corn Sally

Ingredients

1 cupful flour
1 cupful cornmeal
½ level teaspoonful salt
2 level tablespoonfuls sugar
4 level teaspoonfuls baking-powder
2 eggs (1 will do)
1 cupful milk, about
2 tablespoonfuls melted fat

TIME: Preparation, 5 minutes; baking, 25 minutes
NUMBER SERVED: 6 persons

MIX dry ingredients. Beat eggs, add milk; add this to the dry mixture. Now add the melted fat, and pour batter into a well-greased, shallow pan. Bake in a quick oven (about 400° F.) until a golden brown. Serve at once. This is a nourishing bread, easily made, and delicious. Serve hot with butter, honey, or maple syrup for breakfast, luncheon, or supper. Either rye, white, or whole-wheat flour may be used.

Little Dandy Gems

Ingredients

2 cupfuls sifted flour
½ level teaspoonful salt
1 level tablespoonful sugar
2 level teaspoonfuls baking-powder
⅓ level teaspoonful baking-soda, about
1 cupful sour milk (not too sour), about
2 eggs
2 level tablespoonfuls melted fat

TIME: Preparation, 10 minutes; baking, 25 minutes

NUMBER SERVED: 4–6 persons

MIX flour, salt, sugar, baking-powder. Beat eggs. Add soda to sour milk; mix. Add this to the dry ingredients, add beaten eggs, melted fat; beat for a moment, using a double, rotary egg-beater. The batter should be just thin enough to permit the beater to go through it. Pour into hot, greased gem-pans; bake in a quick oven (about 400° F.) until a golden brown. Serve fresh for breakfast or supper. Fat may be omitted entirely.

For Blueberry Muffins, add one cupful floured berries to the batter, and use a little less liquid.

Quick Date Gems

Ingredients

1 cupful whole-wheat flour
1 cupful graham or rye flour
½ level teaspoonful salt
4 level teaspoonfuls baking-powder
2 eggs (or 1 large one)
1 cupful milk
2 level tablespoonfuls melted fat
1 cupful dates, stoned, cut small

TIME: Preparation, 15 minutes; baking, 25 minutes

NUMBER SERVED: 4–6 persons

MIX dry ingredients. Beat eggs without separating; add these to the milk; add this to the dry ingredients; add melted fat, and beat well for a moment. Now add dates lightly floured. Pour into hot, greased gem-pans, sprinkle tops lightly with granulated sugar, and bake in a quick oven. Serve fresh with butter. These are wholesome, nourishing, satisfying; excellent for breakfast, lunch, supper.

Oatmeal-Cheese Scones

Ingredients

1¼ cupfuls rye or whole-wheat flour
¾ cupful rolled oats
½ level teaspoonful salt
4 level teaspoonfuls baking-powder
2 level tablespoonfuls butter substitute
¾ cupful milk, about
Grated cheese

TIME: Preparation, 12 minutes; baking, 25 minutes
NUMBER SERVED: 4–6 persons

MIX dry ingredients. Rub in fat; add milk gradually, just enough to thoroughly moisten dough. Turn dough onto a floured board; knead *lightly* for a moment. Roll into a sheet one-fourth inch thick; cut into small squares; brush each with a little melted fat, and sprinkle grated cheese on half the number. Put together in pairs, place on a shallow greased pan, cut each biscuit into two parts, diagonally; brush tops with milk; bake in a hot oven. Served fresh, these are delicious for luncheon or supper with hot tea, chocolate, or with salad or fruit.

Tiny Tea Biscuit

Ingredients

3 cupfuls flour
¾ level teaspoonful salt
6 level teaspoonfuls baking-powder
4 level tablespoonfuls butter substitute
1 cupful milk, about

TIME: Preparation, 15 minutes; baking, 15 minutes
NUMBER SERVED: Recipe makes 40 small biscuits

MIX and sift dry ingredients. Rub in the fat. Add milk gradually, mixing lightly, until dough is moist. Turn onto a floured board, knead *lightly* a moment. Divide the dough, for convenience. Roll each piece out, lightly, one-fourth inch in thickness. Cut with a *very small* cutter. Put together in pairs with a little soft fat between. Bake in a hot oven—about 425° F. These are attractive for fancy sandwiches, and at times a great convenience. Any flour that is most desirable may be used.

Peanut Scones

Ingredients

2 cupfuls flour
¾ level teaspoonful salt, scant
4 level teaspoonfuls baking-powder
1 level tablespoonful butter substitute
4 level tablespoonfuls peanut butter
¾ cupful milk, about

TIME: Preparation, 8 minutes; baking, 20 minutes
NUMBER SERVED: 4–6 persons

MIX dry ingredients. Rub in the butter and the peanut butter. Add milk gradually, mixing lightly, until dough is just moist enough to drop from tip of spoon. Drop into greased gem-pans, or onto a shallow, greased biscuit-tin; bake in a quick oven—about 425° F. Delicious, nourishing, and very easily made. With cocoa and a green salad, or stewed fruit, these make an excellent supper or luncheon.

Liberty Fig Rolls

Ingredients

1 cupful rye flour
1 cupful graham flour
½ level teaspoonful salt
4 level teaspoonfuls baking-powder
2½ level tablespoonfuls nut butter
⅔ cupful milk, about
Fig filling (See, also, page 194)

TIME: Preparation, 15 minutes; baking, 30 minutes
NUMBER SERVED: 4–6 persons

MIX dry ingredients; rub in nut butter. Add milk gradually, mixing lightly, until dough is moist. Turn onto a floured board, knead lightly a moment, roll out one-fourth inch thick. Spread lightly with soft fat, then generously with fig filling; roll like jelly-roll; cut into thick slices; place close together on a shallow, greased pan, cut side up. Dot with bits of fat; bake in a hot oven.

To make filling: Mix one-half cupful ground figs and one-half cupful ground raisins; add one-eighth cupful sugar, an equal quantity of water; cook a moment until thick and smooth.

Raisin-Nut Bread

Ingredients

1½ cupfuls rye flour
1½ cupfuls whole-wheat flour
¾ level teaspoonful salt
6 level teaspoonfuls baking-powder
¾ cupful chopped nuts (or peanut butter)
¾ cupful raisins
1 egg
1½ cupfuls milk, about

TIME: Preparation, 10 minutes; baking, 40 minutes
NUMBER SERVED: Recipe makes 1 medium loaf

MIX dry ingredients; add nuts, raisins; mix. Beat egg, add milk; add this to dry ingredients; mix lightly. Pour into a greased, narrow bread-pan; let stand fifteen minutes. Bake in a moderately hot oven (about 370° F.). Do not cut until next day. Excellent for sandwiches, or for luncheon or supper with milk, cocoa, or salad.

For variety, either nuts or raisins may be omitted, and either white or graham flour may be used. One level tablespoonful of fat and one-quarter cupful sugar may be added if desired, but are not necessary.

Hominy Popovers

Ingredients

1 cupful cooked hominy (left-over)
1 cupful flour
1⅓ cupfuls milk
4 eggs (3 will do)
½ level teaspoonful salt

TIME: Preparation, 10 minutes; baking, 45 minutes
NUMBER SERVED: Recipe makes 12 popovers

MIX flour with hominy; add salt. Beat eggs, without separating, until light; add this gradually to the flour and hominy. Beat until *very light*, using an egg-beater. Pour into *hot*, greased gem-pans or earthen cups; bake in a moderately hot oven (400° F., increasing to 440° F., then decreasing to 360° F.) until a rich golden brown on all sides. Do not open oven door too soon. If well baked, these will keep their shape even when cold; they should be hollow. Serve hot with butter for breakfast or supper, or as a dessert with Fruit Hard Sauce.

Steamed Brown Bread

Ingredients

1 cupful whole-wheat flour
1 cupful yellow cornmeal
¾ level teaspoonful salt
1¼ level teaspoonfuls baking-soda
½ cupful warm water
½ cupful molasses
1 cupful thick sour milk
1 cupful raisins

TIME: Preparation, 10 minutes; steaming, 3 hours
NUMBER SERVED: Recipe makes 1 large loaf

MIX dry ingredients; add milk, water, molasses; mix well; then add the raisins, well floured. Pour into a buttered mold, cover and steam. This may be served hot or cold. Raisins may be omitted, if desired. When cold this bread makes excellent sandwiches for the picnic lunch; particularly good with cream cheese, nuts, and lettuce.

Spoon Corn Bread

Ingredients

1 pint milk
¾ cupful yellow cornmeal, scant
½ level teaspoonful salt
4 eggs
½ level tablespoonful fat

TIME: Preparation, 20 minutes; baking, 35 minutes
NUMBER SERVED: 4–6 persons

PUT milk in double boiler, add cornmeal; cook to a smooth mush—about twenty minutes. Remove from fire, add salt, fat, and when cool the unbeaten yolks of the eggs; mix well; fold in the stiffly beaten whites. Pour into a well-greased, shallow, earthen dish; bake in a moderate oven until a golden brown. This should puff and double its bulk. Serve at once; dish with a spoon; spread with butter.

For variety, add one cupful minced ham or smoked beef before baking; or, cover bottom of dish with stewed prunes, quartered apples, ripe peaches, or berries, and pour in the batter and bake; serve with cream or milk.

Directions for Bread-making

Ingredients

1 pint milk
1 pint boiling water
3 to 4 level teaspoonfuls salt
1 yeast cake (compressed)
¼ cupful warm water
3 to 4 quarts flour

TIME: Preparation, 5 hours, about; baking, 50 minutes

NUMBER SERVED: Recipe makes 4 medium loaves

PUT milk and salt into the pail of the bread-mixer; add the *boiling* water. When the liquid is lukewarm (about 85° F.) add the yeast, dissolved in warm water, and then add the flour—gradually. Knead five to eight minutes; cover and let stand in a warm place until light—about three hours. When light, turn crank of bread-mixer a moment, then lift dough out onto a floured board, and remove the rod. Cut dough into four pieces, knead into shape, and put into greased pans. Cover with a clean cloth, and let stand in a warm place until double its bulk. Prick tops, brush with milk, bake in a moderately quick oven (400° F., dropping to 370° F.) fifty minutes. Cool on a wire rack; do not cover with a cloth.

For a simpler or cheaper bread, all water may be used; for a richer bread, all milk.

For entire-wheat bread, use entire-wheat flour; for graham bread, use graham flour; for rye bread, rye flour.

For raisin, date, or fig bread, add cleaned chopped fruit before shaping into loaves. For nut bread, add finely chopped nuts. Two cupfuls is a good measure.

For plain rolls, cut bread dough when light into small pieces, shape, brush tops with milk, let stand until light; bake in a hot oven.

If shortening and sugar are desired, add one to two level tablespoonfuls of fat and the same of sugar to the liquid and proceed as directed. Keep top of dough moist while rising to prevent a crust from forming. If bread is to be set overnight, use less yeast.

Exact amount of flour depends upon quality; three parts flour to one of liquid is usually correct, although more is frequently needed. For detailed information, consult Farmers' Bulletin 807, published by the United States Department of Agriculture. This bulletin is free. Special recipes for Victory Breads may be obtained from the United States Food Administration.

Corn-Wheat Bread

Ingredients

1½ cupfuls milk
1½ cupfuls water
1 cupful cornmeal
2 level teaspoonfuls salt
1 level tablespoonful butter substitute
1 yeast cake
4 cupfuls flour, about

TIME: Preparation and baking, 5 hours, about
NUMBER SERVED: Recipe makes 2 small loaves

PUT milk and water into a saucepan or double boiler, add cornmeal, mix; cook carefully to a thick mush—about twenty minutes. Remove from fire, add salt; when lukewarm, add yeast, dissolved in a little milk. Now add enough white or whole-wheat flour to make a soft dough; knead thoroughly on a floured board, adding more flour as necessary, but keeping dough rather soft. Stand in a warm place until very light and double its bulk. Turn onto a floured board, shape into loaves, place in greased bread-pans, and let stand again until light. Bake in a hot oven forty-five minutes. Also makes good rolls.

Oatmeal-Rye Bread

Ingredients

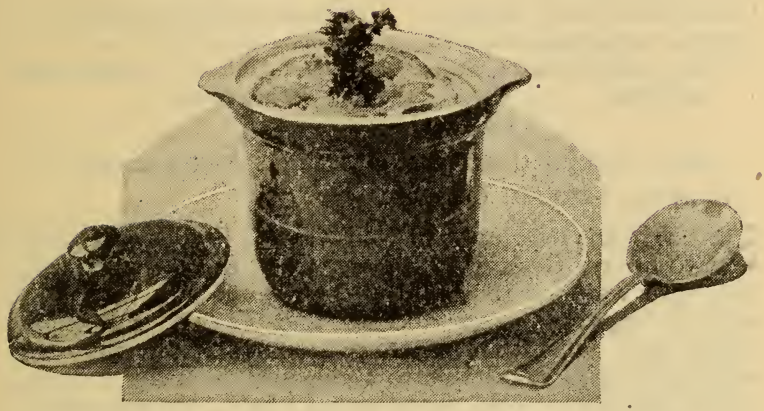
1 cupful hot, cooked oatmeal
1 cupful milk, scalded
2 level teaspoonfuls salt
1 level tablespoonful fat
¼ cupful brown sugar
1 yeast cake
6 cupfuls rye flour, about

TIME: Preparation and baking, 5 hours, about
NUMBER SERVED: Recipe makes 2 loaves

ADD fat, sugar, salt, milk to oatmeal. When lukewarm, add yeast, dissolved in a little milk. Now add gradually, while beating vigorously, enough flour to make a soft dough. Cover; let stand in a warm place until very light. Add remainder of flour, or enough to make a rather stiff dough; mix thoroughly. Drop into narrow, greased pans. Let stand again until loaves double their bulk. Bake in a moderately hot oven forty-five minutes. This is moist and porous.

WORTH-WHILE MEAT-SUBSTITUTE DISHES

EASILY PREPARED—WHOLESOME—DELICIOUS



Spinach Marmite

Ingredients

1½ cupfuls cooked spinach, finely chopped
2 cupfuls spinach water
1 quart milk
Toast
2 level tablespoonfuls butter substitute
4 level tablespoonfuls flour
Salt; pepper; onion salt
Grated cheese

TIME: Preparation and cooking, 25 minutes
NUMBER SERVED: 4–6 persons

SAVE water drained from spinach and use for soup. Put fat into a saucepan; melt; add flour; mix. Add spinach, spinach water, and milk. Cook carefully, stirring until smooth. Have ready round pieces of buttered toast sprinkled with grated cheese. Pour soup into small "marmite" pots, or earthen bowls; place a piece of toast on top of each, stand in oven until cheese is melted. Serve at once. For a thicker soup use only three cupfuls milk.

Black Bean Bisque

Ingredients

1 pint black beans
1 small onion, finely chopped
3 stalks celery, finely chopped
2 level tablespoonfuls butter substitute
Water; salt; pepper
3 hard-cooked eggs, sliced
1 lemon sliced
½ cupful minced, cooked tongue (if available)
2 level tablespoonfuls flour

TIME: Soaking overnight; cooking, 4 hours, about
NUMBER SERVED: 6 persons

SOAK beans overnight in cold water. Drain, add about two quarts fresh, cold water. Cook until tender, adding more water if required. When done, rub through a sieve or vegetable press; add salt and pepper. Put onion, celery, and fat into a small pan; cook fifteen minutes; add flour; mix. Add this to soup, and cook all, stirring, fifteen minutes. Add sliced eggs, lemon, tongue, and a little chopped parsley. Serve very hot. Pass rye-bread toast, or rye rolls, or oven-dried bread.

Lentil-Sausage Soup

Ingredients

1 pint lentils
1 onion
1 small bay leaf
2 level tablespoonfuls fat
2 level tablespoonfuls flour
Water; salt; pepper
4 Frankfurt sausages, boiled
Chopped parsley

TIME: Soaking overnight; cooking, 3 hours, about
NUMBER SERVED: 6 persons

SOAK lentils overnight in cold water. Drain, add about two quarts fresh, cold water, the onion, and bay leaf. Cook slowly until lentils are tender, adding more water if required. When done, rub through a sieve or vegetable press; add salt and pepper. Put fat in a saucepan, melt; add flour; mix. Add this to the strained soup; cook carefully, stirring, ten minutes. Add sausages, peeled and cut into thin, round slices. Serve very hot. If soup is too thick, more water may be added. Pass whole-wheat bread or rye biscuit.

Fish Chowder

Ingredients

4 Bermuda or white onions
3 potatoes, medium size
½ pound salt codfish
1 quart milk
1 level tablespoonful chopped parsley
¼ level teaspoonful white pepper
½ level tablespoonful butter substitute

TIME: Preparation and cooking, 50 minutes
NUMBER SERVED: 4 persons

SOAK fish in cold water overnight, or for several hours. Peel and cut onions into very thin slices; put them into a large saucepan, adding just enough boiling salted water to cover, and simmer gently about fifteen minutes. Now add potatoes peeled and cut into small dice, and enough more boiling water to cover them; cook ten minutes. Add fish, flaked, and cook all for ten minutes longer; add butter substitute, milk, parsley, pepper, salt, if necessary, and cook five minutes more. Serve in individual bowls. Pass large pilot or soda crackers, lightly buttered.

Chicken Curry Soup

Ingredients

1 quart chicken stock
1 pint milk; 2 egg yolks
1 cupful finely chopped celery
2 level tablespoonfuls chicken fat
2 level tablespoonfuls flour
⅓ level tablespoonful curry
1 chicken liver, cooked, chopped
1 pimento, chopped
2 cupfuls boiled rice; salt

TIME: Preparation and cooking, 40 minutes
NUMBER SERVED: 4 to 6 persons

PUT fat into a saucepan; when melted, add celery; cover; cook fifteen minutes. Add flour, curry; mix; add milk, chicken stock. Cook, stirring, until smooth and creamy; season; add beaten egg yolks; cook a moment longer. Have ready hot rice mixed with pimento and liver. Place a spoonful or small mold of rice in each soup-dish, fill with soup, dot with parsley. Serve with hot toasted rolls or pulled bread.

Cream of Peanut Soup

Ingredients

1 quart milk
1 cupful water
¾ cup peanut butter
2 level tablespoonfuls flour
1 tablespoonful chopped celery
½ tablespoonful chopped onion
1 very small bay leaf
Salt; pepper

TIME: Preparation and cooking, 30 minutes
NUMBER SERVED: 4 persons

COOK celery and onion in the water until tender—about ten minutes. Rub flour thoroughly through the peanut butter. Now put this, the milk, bay leaf, and the cooked onion and celery into a saucepan; cook gently, stirring, until thoroughly heated, smooth, and creamy. When boiling-point is reached stir a moment. Remove at once from fire, season, strain, and serve in individual bowls. Another good luncheon or dinner dish; pass toasted graham bread, and follow with salad or a baked fruit pudding.

Cheese Purée or Rarebit Soup

Ingredients

1½ cupfuls grated American cheese
1 quart milk
1 level tablespoonful nut butter
2 level tablespoonfuls flour
Yolks of 2 eggs
Few drops onion juice
Salt; paprika; chopped parsley
¾ cupful boiled rice, or 4 slices toast

TIME: Preparation and cooking, 20 minutes
NUMBER SERVED: 4 persons

PUT butter into a saucepan; when melted add flour and seasoning; mix. Now add milk and cheese, and heat all slowly, stirring carefully, until whole becomes creamy and smooth. Add rice and egg yolks, slightly beaten; stir a moment, then pour immediately into individual serving-bowls. If preferred, omit rice, and pour into soup-plates, with a slice of crisp buttered toast in each dish; sprinkle with chopped parsley. Very easily and quickly made; nourishing and good. Serve with salad.

Lentil Rice, Tongue Garnish

Ingredients

1 cupful lentils
¾ cupful rice
1 onion, chopped
1 level tablespoonful fat
½ teaspoonful kitchen bouquet
Salt; pepper
1 can potted tongue, small
½ cupful bread-crumbs, soft
1 egg, beaten
2 bouillon cubes
2 level tablespoonfuls fat
2 level tablespoonfuls flour
1 cupful water

TIME: Preparation, soaking overnight; cooking, 2 hours
NUMBER SERVED: 4–6 persons

WASH the lentils; soak overnight in cold water. Drain, cook in boiling water until tender; drain. Boil and drain the rice, add to the lentils; season with salt, pepper, and the onion, which has been cooked until soft in the fat, without browning. Heat for a moment. Mold in a bowl, and keep hot until ready to serve. Add crumbs and egg to the tongue. Form into small balls and poach, in gently boiling water, for ten minutes. While these are cooking, dissolve the cubes in one-quarter cupful hot water, then add three-quarters cupful cold water. Melt two tablespoonfuls fat, add the flour, mix; add the bouillon and cook until thick and smooth; add the bouquet. Turn out the lentils and rice on a deep platter. Pour the sauce around the mold, garnish with the balls. Serve very hot. Chipped beef, ham, or Frankfurt sausages, boiled or split and broiled, may be used in place of the tongue balls.

A good dinner dish. Serve finely shredded cabbage salad with orange dressing, cheese wafers, and caramel custards or a fruit jelly.

Stewed Soy Beans

Ingredients

2 cupfuls dried soy beans
1 can tomatoes
1 small onion, chopped
1 green pepper, chopped
½ cupful minced ham
1 level teaspoonful fat
1 level tablespoonful flour
Water; salt.

TIME: Soaking, 24 hours; cooking, 2 hours, about
NUMBER SERVED: 6 persons

SOAK soy beans in cold water twenty-four hours. Cook slowly, in enough water to cover them, until tender; add salt, and drain. Add onion and pepper to tomatoes, and cook twenty minutes; add ham; melt butter, add flour, and add this to the tomatoes. Now add this to the beans; heat all together for a few minutes, and serve in a large dish with a garnish of boiled rice. These beans rank high in food value, can well take the place of meat, and are inexpensive; they have a rich, delicious flavor. Other beans may be prepared and served in the same way.

Cheese Soufflé

Ingredients

4 eggs
1½ cupfuls American cheese, cut fine
6 level tablespoonfuls flour
1⅓ cupfuls milk
¼ cupful bread-crumbs
¼ level teaspoonful salt
⅛ level teaspoonful paprika
3 level tablespoonfuls butter substitute

TIME: Preparation, 20 minutes; baking, 25 minutes
NUMBER SERVED: 4–6 persons

MELT the butter, add the flour, mix; add the milk and cook, stirring constantly, until thick and smooth; add cheese and continue cooking until it is melted; add seasoning. Cool, add yolks of eggs, unbeaten, mix thoroughly; fold in carefully the stiffly beaten whites. Pour into a buttered earthen baking- or souffié-dish, sprinkle the top with crumbs, add a few bits of butter, and bake in a moderately hot oven. Send at once to the table. Serve with a crisp lettuce and tomato salad.

A Spaghetti Rarebit

Ingredients

½ pound soft American cheese
¼ package spaghetti, cooked
⅓ cupful milk or cream
1 egg
1 level tablespoonful butter
1 teaspoonful Worcestershire sauce
Salt, pepper

TIME: In chafing-dish, 15 minutes, about
NUMBER SERVED: 3 persons

CUT cheese into small pieces. Put butter and cheese into chafing-dish; heat slowly. When cheese is melting, add egg and milk, beaten together; stir and cook until creamy, add spaghetti, heat thoroughly, add seasoning and serve at once.

Inexpensive, nourishing, easily prepared. Serve with a green salad, rye bread or toast, and a fruit dessert.

Samp, Bremestead

Ingredients

1¼ cupfuls large hominy or samp
½ pound cheese, cut small
1 cupful milk
2 level tablespoonfuls fat
2 level tablespoonfuls flour
Salt; paprika

TIME: Soaking, 12 hours; cooking, 5 hours, about
NUMBER SERVED: 4–6 persons

WASH samp; soak overnight in cold water. Next morning, cook slowly, adding more water as necessary, until tender—or cook in fireless cooker. When done, add salt, and drain off carefully any excess water. Melt fat, add flour, mix; add milk, cook, stirring until smooth and creamy; add cheese, season with salt and paprika, and continue cooking until cheese is melted, and the sauce thick and smooth. Serve samp in a large, round dish, pour sauce over it, and send at once to the table. For variety, samp may be put into a baking-dish, the sauce poured over it, and browned in the oven. This is a nourishing dish, and a meal in itself; serve with graham gems and a fruit dessert.

Rice and Cheese

Ingredients

2½ cupfuls cooked rice
1 cupful finely cut American cheese
1 cupful milk
2 level tablespoonfuls fat
2 level tablespoonfuls flour
½ level teaspoonful salt
Few grains paprika
¼ cupful bread-crumbs

TIME: Preparation, 15 minutes; baking, 15 minutes
NUMBER SERVED: 4–5 persons

USE left-over cold boiled rice. Melt fat, add flour; mix; add milk, cook, stirring until smooth and thick. Add cheese, salt, and paprika; stir until cheese melts; add rice. Grease a shallow, earthen baking-dish, fill with mixture, cover with crumbs, and bake in a moderate oven until top is golden brown. Left-over cooked breakfast hominy, or boiled samp, may be substituted for the rice. This is a delicious and nutritious dish with meat value. Serve with coarse bread and a salad, or fruit.

Spinach Beauregard

Ingredients

2 quarts spinach
Butter, pepper, and salt to season
Sliced ham or broiled bacon
3 level tablespoonfuls fat
3 level tablespoonfuls flour
Salt; pepper
3 eggs, hard-cooked
1½ cupfuls milk

TIME: Preparation and cooking, 50 minutes
NUMBER SERVED: 4 persons

CLEAN spinach thoroughly, cook until tender in a very little water; drain, chop fine and season. Melt three level tablespoonfuls fat, add flour; mix. Add milk, and cook slowly, stirring until sauce is smooth and creamy; season. Add whites of eggs, chopped. Dish spinach, mounding it in center of a platter; pour sauce around; cover spinach with yolks of eggs pressed through a sieve. Garnish with broiled bacon or ham.

Creamed Scallops and Shrimps

Ingredients

1 pint fresh scallops
½ pound cooked shrimps
1 cupful milk
3 level tablespoonfuls cooking-fat
4 level tablespoonfuls flour
1 hard-cooked egg
Salt; pepper; onion salt, few grains
½ level tablespoonful chopped parsley

TIME: Preparation and cooking, 20 minutes
NUMBER SERVED: 4–6 persons

PUT fat into a saucepan, or use a chafing-dish. When melted, add flour; mix; add milk, cook slowly, stirring, until smooth, creamy, and quite thick. Now add scallops, seasoning, and let cook about ten minutes. As the scallops begin to cook the sauce will become much thinner. Now add shrimps, chopped white of egg, and yolk of egg rubbed to a paste with a little of the sauce. Cook five minutes longer; add parsley, serve piping hot. Pass toast.

Calcutta Rice

Ingredients

⅔ cupful rice
1 level tablespoonful nut butter
1 green pepper, cut small (or 1 pimento)
1 cupful crab-flakes (fresh or canned)

For Curry Sauce:
1 small onion chopped fine
2 level tablespoonfuls fat
2 level tablespoonfuls flour
1 level teaspoonful curry powder
1 cupful milk; salt

TIME: Preparation and cooking, 30 minutes
NUMBER SERVED: 4 persons

COOK rice in rapidly boiling, salted water until tender; drain. Melt butter, add pepper; cook ten minutes. Mix this through the cooked rice. Prepare curry sauce, add crab-flakes, heat. Heap rice on a dish; make a hollow in center; fill with curried crab-flakes; garnish with parsley. Left-over chicken may be substituted for crab-flakes.

To make sauce: Melt fat, add onion, curry; cook until onion is tender; add flour; mix; add milk, and cook, stirring, until thick and smooth; add salt.

Eggs Florentine

ARRANGE thin slices of dry toast on a hot platter. Cover each slice with a generous spoonful of nicely seasoned, hot, carefully cooked spinach. Top each portion with a fresh egg, perfectly poached, and pour a hot cheese sauce over the whole.

To make sauce: Put two level tablespoonfuls vegetable fat into a saucepan, add two level tablespoonfuls flour; mix; add one cupful milk; cook, stirring, until smooth and beginning to thicken. Now add one-half cupful American cheese, cut small; continue cooking, and stirring, until cheese is melted and sauce is thick and smooth. Season with salt and pepper.

Fish Omelet

MAKE a cheese sauce as directed in Eggs Florentine. Add to this one cupful cooked, fresh fish-flakes. Heat carefully. Make a small French omelet; when set, place a spoonful of the prepared fish in center, fold, turn onto a hot platter; pour remainder of fish around omelet; garnish with parsley. Serve at once. Nourishing, good, and very quickly made.

To make omelet: Break three fresh eggs into a bowl, add two tablespoonfuls water; beat lightly with a fork—*just enough to mix whites and yolks.* Put a level tablespoonful fat into a small omelet-pan; when hot—but not brown—turn in the eggs; cook carefully, shaking pan occasionally, until omelet is set; sprinkle with salt and pepper; fold.

Salmon Loaf

Ingredients

2 cupfuls salmon (1 large can)
2 eggs, beaten
1 cupful milk
Salt; pepper
1 cupful bread-crumbs, not too dry
1 lemon
6 pimento olives
Tartare sauce

TIME: Preparation, 20 minutes; cooking, 35 minutes
NUMBER SERVED: 6–8 persons

REMOVE skin and particles of bone from salmon; separate into flakes; add eggs, milk, crumbs; season with salt and pepper. Pour into a buttered mold or bread-pan, and steam, on top of stove or in oven, until set. Turn onto a hot platter, garnish with thin slices of lemon, placing half an olive in the center of each slice; place a spoonful of sauce tartare at either end.

Fish Puffs

BAKE large potatoes until soft. When done, cut a slice from top of each, lengthwise; scoop out the potato. Season with salt, pepper, butter, and a little hot milk. Add an equal quantity of fish-flakes, and one beaten egg for each three potatoes. Refill shells; place a slice of bacon on top of each; brown in a hot oven. Serve with salad, for luncheon or dinner.

Chicken and Rice Pies

GREASE individual dishes, cover the bottom of each with a layer of boiled rice, add a layer of cooked, diced chicken, then a layer of well-made, nicely seasoned cream sauce. Now add another layer of rice, chicken, and sauce, continuing until dishes are full. Bake in a moderate oven until hot and tops are brown. If possible, use chicken stock for the sauce.

SOME GOOD VEGETABLES AND SALADS

The preparation of green vegetables counts for quite as much as the cooking. Vegetables to be good must be properly ripened, and as fresh from the garden as possible. Wilted vegetables, if not stale, may be restored by putting them in cold water for an hour or two. All sand and decayed matter should be carefully removed before cooking. A brush for scrubbing saves labor; a small sharp knife is essential; special cutters are attractive but not necessary.

Carrots and turnips should be diced, or cut into long, thin "strings." Beets are washed, without breaking the skin, and four or five inches of the green stem should be left on; they may be cut as desired after cooking; when tender, the green tops may be cooked in the same way as spinach. Cabbage should be shredded, then simmered gently for twenty minutes, without a cover. The success of spinach depends upon careful washing, and fine chopping after cooking; beans, on the proper stringing and cutting. Peas and corn are only good when fresh; peas are sweeter if two or three pods are boiled in the water with them; corn may have the final inner husk left on; both vegetables should be timed carefully, as over-cooking is disastrous.

When cooking all vegetables, preserve color, flavor, and valuable nutritive elements as far as possible. When practical, baking is desirable. The very watery vegetables —squash, spinach, beet tops—should be cooked over steam, or with very little water. For vegetables that must be boiled, do not use more water than is necessary, and save this water for soups and sauces; it is valuable. Use fresh boiling water only, and continue the boiling *very gently* until the vegetable is tender—no longer. A cover is not necessary. As a rule, top-ground vegetables should be cooked in salted water; underground vegetables should be salted after cooking.

Salad greens should be thoroughly cleaned and crisped in iced water before using.

Trench Succotash

9 ears green corn
2 quarts new lima beans
¼ pound dried, chipped beef, about
¼ cupful milk, about
Salt, pepper, butter for seasoning

TIME: Preparation and cooking, 1 hour, about
NUMBER SERVED: 6 persons

SHELL the beans. Select well-ripened sweet corn; score kernels; with back of knife-blade press out pulp and juice; place this in refrigerator until ready to use. Cook corn-cobs in boiling, salted water—just enough to cover—for fifteen minutes. Remove cobs, and use this water for cooking beans. When beans are tender, drain off some of the water, retaining about one cupful. Add corn to beans, season; add beef which has been freshened by scalding with boiling water. Heat all slowly together. An excellent dinner dish, and a complete meal in itself. Serve with rye muffins or brown bread.

Boiled New Squash

SELECT very small new squash—either white or the yellow crook-necks—before the skin or shell has hardened. Trim off the stem ends, and cook the squash whole in boiling salted water until tender, about thirty minutes. When done, drain carefully. Serve on individual plates, splitting each squash partly open. Cover with cream sauce, add chopped parsley.

Mushrooms in Cream

SELECT firm, solid field mushrooms. Wash carefully, under running water, gill side down. Break off the stems, cutting off and discarding the hard ground end portion. Slice the stems. The mushrooms themselves may be kept whole or sliced. To a half-pound of mushrooms allow one and one-half level tablespoonfuls butter substitute. Put this into a saucepan; when melted, add mushrooms, sprinkle with a little salt and pepper, cover closely, and *simmer* about twenty minutes; add one-third cupful thin cream; cook two minutes. Serve at once on thin toast, or around an omelet, or with spinach.

Stewed Cucumbers

SELECT small ripe cucumbers; pare and cut into halves lengthwise. Boil carefully in salted water until tender, about twenty minutes. Drain; serve on strips of toast, with the following sauce: Put two level tablespoonfuls of fat in a saucepan; when melted, add two level tablespoonfuls flour; mix, add one cupful water in which cucumbers were cooked; stir until thick and smooth, add salt, pepper, and juice of half a lemon. These are delicious.

Stuffed Green Peppers

REMOVE seeds from sweet green peppers; parboil peppers in boiling, salted water ten minutes. Score and cut old green corn from the cob; season with pepper, salt, a spoonful or two of milk, and a little chicken fat or bacon drippings. Cook carefully about five minutes. Fill peppers with prepared corn, cover tops with bread-crumbs, dot with a bit of fat, bake until tender. Serve hot with tomato sauce.

Tomato Cocktail

SELECT firm, ripe tomatoes. Put them into a wire basket and plunge into boiling water for a moment; remove the skins. Put aside in the refrigerator until very cold. At serving-time, cut into cubes, season with salt and pepper, and add enough mayonnaise dressing to cover the tomatoes. Serve very cold in tall glasses or small glass cups. Sprinkle chopped parsley over top of each.

Grilled Egg-plant

PARE an egg-plant; cut into slices one-third of an inch thick. Dust with salt and pepper; brush with melted fat or olive oil. Broil over a hot fire until brown; turn slices, baste again with butter, and brown. Halved tomatoes and raw potatoes, sliced, may be quickly grilled in the same way.

Asparagus, with Mayonnaise

Ingredients

1 bunch asparagus
Sliced cold ham or tongue
4 eggs, hard cooked
½ cupful mayonnaise
1 tablespoonful whipped cream
1 teaspoonful chopped parsley

TIME: Preparation, about 35 minutes

BOIL the asparagus carefully in salted water; drain and cool. At serving time arrange it in the center of a platter with thin slices of ham or tongue around it. Cut the eggs into halves, placing a half on each slice of meat. Add the cream to the mayonnaise, which should be quite stiff, and pour this over the green ends of the asparagus; sprinkle the parsley over the top. The whole should be served very cold.

This makes an excellent luncheon or supper dish for warm days. Serve with tea-biscuit sandwiches.

Débutante Salad

Ingredients

1 head lettuce
1 bunch cress
1 cupful chopped celery
French dressing
1 cupful diced cooked tongue
1 cupful diced cooked chicken
12 large pitted olives cut in rings
Cream mayonnaise

TIME: Preparation, 40 minutes
NUMBER SERVED: 8 persons

MIX celery, tongue, chicken and olives. Season with French dressing; let stand in refrigerator until very cold. Just before serving add enough cream mayonnaise to well cover every particle of salad. Arrange on a bed of crisp cress and lettuce. A very dainty luncheon or reception salad.

Rice Salad

Ingredients

2 cupfuls boiled rice
½ cupful diced cooked carrots or beets
1 green pepper, finely chopped
Salt; pepper
Few drops onion juice
French dressing; mayonnaise
Chopped parsley
Cocoanut-cheese balls

TIME: Preparation, 35 minutes

NUMBER SERVED: 4 persons

USE rice which has been cooked in rapidly boiling water until tender—about twenty minutes; drain very carefully. When cool, add vegetables, seasoning, and enough French dressing to moisten the mixture. Heap in the center of an attractive dish; cover top with mayonnaise, add a sprinkling of parsley; garnish with a circle of the cheese balls, and a few leaves of crisp lettuce or cress. Serve cool, but not chilled. A good luncheon or dinner dish; complete with brown bread and butter, biscuits, or muffins, and hot tea or cocoa.

A Food-Fruit Salad

Ingredients

1 small, ripe pineapple, shredded
1 cupful diced sweet apple
1 ripe banana, sliced
1 orange
½ cupful raisins
Mayonnaise or pineapple dressing
Shredded cocoanut or chopped nuts
Lettuce

TIME: Preparation, 25 minutes

NUMBER SERVED: 6 persons

PREPARE the pineapple; add raisins, and the orange, carefully peeled, the fine skin removed, and left in sections. Let this stand in a cold place until chilled. Now add apples, freshly cut, and the banana. Cover with dressing; serve on individual plates on a bed of crisp lettuce or other salad greens; sprinkle with shredded cocoanut. A good dish for luncheon or supper, or an excellent combination salad and dessert for dinner. Serve with thin bread-and-butter sandwiches or small rolls.

Calico Salad

Ingredients

1 cupful fresh boiled potatoes, cut small
1 cupful new carrots, cooked, diced
1 cupful new turnips, cooked, diced
1 cupful peas or beans, cooked
1 head lettuce, or other salad green
French dressing; mayonnaise; onion juice

TIME: Preparation, 45 minutes

NUMBER SERVED: 6 persons

BOIL potatoes, drain, and while still warm cut into dice; cut carrots and turnips. Add these to the potatoes; add peas or beans, mix carefully, and cover with a well-made French dressing; add a few drops onion juice. Let stand in a cold place several hours. At serving time, arrange crisp lettuce on a dish, heap vegetables in center, garnish with small gherkins, or olives, or bits of beet or tomato; top with a spoonful of mayonnaise. An excellent luncheon dish. Serve with bread and butter sandwiches, or fresh biscuit, and tea or hot cocoa. Also a good salad to complete a cold meat dish for dinner.

Stuffed Tomato Relish

Ingredients

1 head lettuce or cress
6 ripe tomatoes
2 cupfuls flaked crab meat
1 small jar pickled mussels
Salt; pepper; onion juice
Mayonnaise dressing

TIME: Preparation, 25 minutes

NUMBER SERVED: 6 persons

SCALD tomatoes, remove skins. Scoop out a portion of the centers. Stand tomatoes in refrigerator until cold. At serving time, season tomatoes and stuff with the crab-flakes through which mayonnaise has been carefully mixed. Place tomatoes on a bed of crisp lettuce, garnish tops with mayonnaise, two whole mussels, and a little chopped parsley. Serve very cold. A refreshing supper or light dinner dish; also a good first course for the company dinner.

A Summer Salad

Ingredients

1 head lettuce
2 large ripe tomatoes
¾ cupful cottage cheese
Chopped olives or gherkins
French dressing

TIME: Preparation, 15 minutes
NUMBER SERVED: 4 persons

SCALD tomatoes; remove skins. Cut each tomato into halves, crosswise; stand in a refrigerator until very cold. At serving time, place a slice of tomato on a bed of crisp lettuce, using individual plates. Cover each tomato with a spoonful of cheese, sprinkle generously with finely chopped olives, and pour over this some French dressing. A few chopped nuts may be added if desired. Serve with whole-wheat or graham bread. An excellent hot weather luncheon or supper dish. When available, cream cheese may be substituted for cottage cheese.

An Autumn Salad

Ingredients

6 large red apples
Finely shredded cabbage
½ cupful chopped walnuts
Mayonnaise or boiled dressing

TIME: Preparation, 30 minutes
NUMBER SERVED: 6 persons

WASH the apples; dry and polish with a clean cloth. Cut a slice from the top of each. Remove core and seeds; scoop out the apple without breaking the skin. Chop the apple very fine. Mix with it an equal quantity of shredded cabbage, the nuts, and enough mayonnaise or cooked dressing to well cover every particle of fruit and cabbage. Mix thoroughly; refill the apple cups; serve on individual plates on a bed of chicory or lettuce leaves. Garnish the top of each apple with a spoonful of dressing and half a nut meat. Serve very cold. An excellent supper salad to serve with cold meat. Pecan or hickory nuts may be substituted for the walnuts.

Orchard Salad

PARE two ripe peaches, two ripe pears, and two sweet apples. Cut fruit into thin slices or small cubes. Arrange on a bed of crisp lettuce and cover with cream mayonnaise. Serve very cold.

Orange-Date Salad

PEEL three large oranges; separate in sections, removing fine skin. Arrange on a bed of crisp lettuce, lapping one section over the other so as to form a circle; fill center with chopped dates and nuts. Garnish with cream cheese; serve with French dressing. Oranges may be cut in thin round slices if preferred.

Bermuda Salad

CUT new Bermuda onions into *very thin*, round slices. Cover generously with French dressing; sprinkle with finely chopped parsley. Sliced radishes, or a chopped tomato, or a little cucumber may be added if desired.

Economy Salad

MIX equal quantities finely cut celery and apple; add a few chopped nuts and a small quantity cottage cheese. Mix carefully through this a well-made French dressing. Serve cold on a bed of crisp lettuce or cress.

Nut-Cheese Balls

MIX equal parts of peanut butter and fresh cream cheese, or home-made cottage cheese. Add a few grains of salt, and moisten with a little thin cream, if necessary. Form into small balls. Serve with salad and wafers. Shredded cocoanut, or other chopped nuts, may be substituted for peanut butter.

Ideal Salad Dressing

MIX together six tablespoonfuls olive oil, juice and pulp of one orange, one-fourth level teaspoonful salt. A good dressing for plain lettuce, shredded cabbage, or fruit. Wholesome for children.

Roquefort Dressing

MASH a small quantity of Roquefort cheese and stir through a well made French dressing. Serve on lettuce hearts. Other cheese may be substituted.

Russian Dressing

TO one cupful mayonnaise add one tablespoonful, or more, of tomato catsup or chilli sauce and several olives finely chopped. Serve with lettuce hearts.

Five-minute Mayonnaise

PUT two egg yolks into a small, cold bowl. Add one-eighth level teaspoonful salt, few grains of pepper, and one-half tablespoonful lemon juice; mix. Now add one tablespoonful olive oil, and beat—using a small, double, rotary egg-beater. Continue adding oil, a tablespoonful at a time, alternating with a drop or two of lemon juice until the desired quantity of dressing is made. From one-half to a cupful can be made in about five minutes.

Cream Mayonnaise

TO a quantity of stiff mayonnaise add an equal quantity—or less—of whipped cream. This dressing should be used the day it is made, and kept in the refrigerator until it is ready to be served.

Pineapple Dressing

MIX six tablespoonfuls pineapple juice, three level tablespoonfuls granulated sugar, two eggs, beaten, one level tablespoonful cornstarch, and one level tablespoonful nut butter. Cook over boiling water, stirring constantly, until smooth and thick. Remove from fire, cool, add three-fourths cupful of cream, whipped. Excellent for pineapple or other fruit salad when served as a combination salad and dessert.

LIBERTY DESSERTS

Easily Made—Not Expensive—Wholesome

Remember to estimate the dessert as part of the nourishment of a meal, not as an extra for pleasure only. Sugar, fats, wheat flour are precious foods and must be used as such, not as luxuries. Cream is a most valuable food and one of the most wholesome forms in which fat can be taken; in addition, its use insures attractive dishes with little labor and no cooking. It must, however, during our period of milk shortage, be used with the utmost judgment and fairness.

ONE TABLE INSTEAD OF MANY RECIPES

For the Every-day Dessert

GELATINE DESSERTS

Name	Gelatine	Water	Sugar	Fruit Juice	Fruit Pulp	Milk or Cream
Lemon Jelly	½ package	1 cup, cold 2 cups, boiling	¾ cupful	½ cupful lemon		
Orange Jelly	½ package	½ cup, cold 1½ cups, boiling	1 cupful	1 lemon	3 oranges	
Prune Jelly	½ package	½ cup, cold	½ cupful	1 lemon	2 cups hot prune pulp 2 oranges	
Jellied Fruit	½ package	½ cup, cold 1 cup, boiling	¾ cupful	1 cup grape 1 lemon	2 oranges 1 banana	
Jellied Berries	½ package	½ cup, cold 1¼ cups, boiling	¾ cupful	1 lemon 3 oranges	2 cups sugared berries	

To Make.—Soak gelatine in cold water ten minutes; add sugar, boiling water; stir until dissolved; add fruit juice or pulp. Pour into a mold, glass dish, or individual glasses. Where fruit pulp is used, stir, occasionally, as jelly cools. For jellied berries, pour jelly, when made, over fruit, arranged in a glass dish or small glasses.

Similar tables may be arranged for tapioca, rice, and other simple desserts.

Apple Charlotte

GREASE a rather shallow tin cake pan; one with a tube in the center is best. Cover the bottom with a layer of crushed dry bread-crumbs; add a layer of well-made, sweetened apple sauce, and dot this with a few bits of quince or other preserve. Now add another layer of crumbs, then more apple sauce, the bits of preserve, and continue until the pan is full. The last layer should be of crumbs. Cover top with bits of butter substitute. Bake in a moderate oven until a rich brown—about forty minutes. When *slightly* cool, turn out onto an attractive dish. Serve warm with cream, or with Custard or Ice-cream Sauce· or serve cold without cream or sauce.

Pears, Delicious

PEEL ripe pears; do not cut off the stems. Cut them into halves. Cook in a rather heavy syrup until very tender. A few cloves may be added to pears while cooking. When done, drain pears, and arrange pieces on thin slices of toast. The toast should be cut to fit the pears, and each slice dipped into the hot syrup before it is put on the plate. Top each portion with a few preserved strawberries, bits of quince, or peach, or any other preserved fruit that may be convenient. Add a spoonful of whipped cream, if available. What remains of the syrup may be poured around the pears on the dish. If cream is not available, the pears may be served plain or with a Custard Sauce.

Strawberry Rice

Ingredients

⅓ cupful rice
3 cupfuls milk
¼ level teaspoonful salt
1 cupful ripe berries

For Strawberry Sauce

1 cupful ripe berries
½ cupful water
1 cupful sugar
Chipped rind ½ orange

TIME: Preparation and cooking, 1 hour, about
NUMBER SERVED: 4–6 persons

WASH the rice. Put the milk into a double boiler, add the rice, salt, and cook until the rice is soft and has absorbed all the milk. This will take about one hour. Turn into individual cups or a large mold, and when cold turn out and serve with Strawberry Sauce.

To make the sauce: Put the sugar and the water and the orange rind into a small saucepan; heat slowly, stirring, until sugar is dissolved; boil gently to a heavy syrup, one that will spin a thread when dropped from the tip of a clean spoon. Remove from the fire, add the berries, which have been carefully washed, hulled, and cut into halves.

Pineapple Tapioca

Ingredients

1 small pineapple, shredded and sweetened
½ cupful fine tapioca
1¾ cupfuls water
¼ level teaspoonful salt
⅓ cupful sugar
Juice of 1 orange

TIME: Preparation and cooking, 45 minutes
NUMBER SERVED: 6 persons

BRING water to boiling-point, add salt, stir in tapioca, and cook until thick. Add sugar, pineapple, cover and let cook until clear. Add orange juice, pour into individual glasses. Serve slightly warm. Pass Ice-cream sauce.

To make sauce: Beat one egg yolk until light, add one-fourth cupful confectioners' sugar and one-half cupful cream, whipped, but not too stiff.

Date-Nut Puddings

Ingredients

¾ cupful soft bread-crumbs
½ cupful chopped walnuts or pecans
½ cupful dates, chopped
½ level teaspoonful baking-powder
½ cupful sugar
1 level tablespoonful butter substitute
½ cupful milk
1 egg; pinch of salt

TIME: Preparation, 15 minutes; baking, 30 minutes
NUMBER SERVED: 4–6 persons

MIX dry ingredients; add fat, melted, and milk and egg, beaten together. Pour into well-greased gem-pans; bake in a moderate oven until a golden brown. Serve warm with cream, or Lemon Sauce.

To make sauce: Mix two level tablespoonfuls cornstarch, an equal quantity of butter substitute, one-half cupful sugar, and one egg. Add two cupfuls boiling water, and cook carefully, stirring, until smooth and rather thick. Remove from fire, add juice and grated rind of one lemon, and a few grains of salt.

Zuñi Peach Pudding

Ingredients

1 cupful fine cornmeal
1 cupful flour
½ level teaspoonful salt
4 level teaspoonfuls baking-powder
3 level tablespoonfuls melted fat
2 eggs
1 cupful milk
½ cupful granulated sugar
½ level teaspoonful ground cinnamon
Ripe peaches, peeled and halved

TIME: Preparation, 15 minutes; baking, 35 minutes
NUMBER SERVED: 6–8 persons

MIX meal, flour, salt, baking-powder. Beat eggs until light, add milk; add this to dry ingredients; beat thoroughly. Add melted fat, mix; pour batter into a shallow baking-pan. Lay the halved peaches on top, pressing them lightly into the matter; cover with the sugar and cinnamon, mixed; dot top with a few bits of butter. Bake in a moderately hot oven until peaches are soft, and pudding a rich golden brown. Serve warm with milk, cream, or peach syrup.

Thanksgiving Pudding

Ingredients

½ cupful suet, finely chopped
1½ cupfuls flour
½ level teaspoonful baking-soda
½ level teaspoonful salt
½ cupful molasses
½ cupful milk
1½ cupfuls figs and raisins, mixed, cut small
1 level teaspoonful ginger
½ level teaspoonful cinnamon
¼ level teaspoonful ground cloves

TIME: Preparation, 15 minutes; steaming, 2½ to 3 hours
NUMBER SERVED: 4–6 persons

SIFT soda, salt, spices with flour; add suet, molasses, milk; mix well. Add figs and raisins, well floured. Turn into a well-greased mold; cover, and steam. Do not disturb steamer while pudding is cooking. Serve *hot* with Hard Sauce, made with butter substitute.

Christmas Pudding

Ingredients

1 pound suet, finely chopped
¾ pound bread-crumbs, not too dry
1 cupful flour, sifted
1 pound seeded raisins
¾ pound cleaned currants
¼ pound figs, finely chopped
¼ pound candied orange peel, shredded
¼ pound citron, shredded
½ nutmeg, grated
½ pound walnuts and almonds, chopped
¾ cupful grape juice
¼ cupful orange juice
5 eggs
1¼ level teaspoonfuls salt

TIME: Preparation, 1 hour; steaming, 8 hours
NUMBER SERVED: Recipe makes 6 pounds of pudding

MIX fruit, nuts, citron, flour, add salt, suet, nutmeg, crumbs; mix again. Beat eggs, without separating, until light; add fruit juice. Pour this over the dry mixture; mix well until all is moist. Pack in covered greased pails or molds; steam eight hours. When done, remove covers; when cold, re-cover; put away until ready to use. This keeps indefinitely. Resteam several hours before serving. Pass Hard or Foamy Sauce. (Adapted from Mrs. Rorer's recipe.)

Quick Strawberry Dumpling

Ingredients

1 cupful flour
¼ level teaspoonful salt
2 level teaspoonfuls baking-powder
1 level tablespoonful butter substitute
⅓ cupful milk, about
Fresh strawberries; sugar

TIME: Preparation, 8 minutes; steaming, 40 minutes
NUMBER SERVED: 3 persons

MIX and sift dry ingredients; rub in the butter; moisten with just enough milk to make a soft dough. Divide dough into two parts; pat out each piece. Lay one piece in bottom of greased, small, enameled bowl, spreading dough so that bowl is partly lined. Fill center with berries, sprinkle with sugar; cover with second piece of dough. Place in steamer, cover, steam continuously until done. Serve hot with Strawberry Hard Sauce. Other fruits may be substituted.

To make sauce: Cream one-third cupful butter, or nut butter, add one cupful confectioners' sugar, and several large berries; beat well.

Banana Charlotte

Ingredients

2 large, ripe bananas
1 tablespoonful orange juice
⅓ cupful powdered sugar
1 cupful cream, whipped
12 ladyfingers

TIME: Preparation, 15 minutes
NUMBER SERVED: 4 persons

PEEL bananas, crush to a pulp; add orange juice and sugar. Fold in the whipped cream. Mix lightly. Heap in individual glasses, lined with split ladyfingers. Garnish with chopped candied pineapple; top with a crystallized mint leaf. Easily and quickly made, and nice enough for any company dessert, also a good dessert for the meal at which no butter has been served.

Maple Cream

Ingredients

4 cupfuls thin cream
1 cupful maple syrup
½ teaspoonful maple extract

TIME: Preparation, 8 minutes; freezing, 25 minutes
NUMBER SERVED: 6 persons

MIX syrup and cream; add flavoring; freeze. When frozen, repack freezer and stand aside for an hour or two. A soft custard may be substituted for cream.

Florida Ice

PEEL three ripe bananas; crush these to a pulp; add juice of two lemons and four oranges. Boil three cupfuls water and two cupfuls sugar, and chipped rind of one lemon and one orange together for eight minutes. Remove from fire, and when cool combine with the fruit mixture. Turn into a freezer and freeze.

Frozen Peaches

Ingredients

6 large, ripe peaches (or 8 small ones)
3 cupfuls water
2 cupfuls sugar
5 peach kernels, crushed
White of 1 egg
2 level tablespoonfuls powdered sugar

TIME: Preparation, 20 minutes; freezing, 25 minutes
NUMBER SERVED: 6–8 persons

WASH, peel, and crush peaches. Boil water, sugar, peach skins, and kernels together for eight minutes. Strain; when cold, add crushed peaches; freeze. When frozen, add the white of the egg, which has been beaten to a stiff meringue, with the powdered sugar added. Repack, and let stand an hour before serving. An economical frozen dessert; utilizes perishable fruit, and requires no cream.

A Good Sponge Cake

Ingredients

3 eggs
1 cupful sugar
¼ level teaspoonful salt
Juice and rind ½ lemon
⅓ cupful warm water
1 cupful flour
1½ level teaspoonfuls baking-powder

TIME: Preparation, 10 minutes; baking, 35 minutes
NUMBER SERVED: Recipe makes one large loaf

SEPARATE eggs; beat yolks until very light; add sugar gradually and continue beating. Add salt, lemon, water, flour, baking-powder; beat well. Fold in the stiffly beaten whites. Pour into a round, or narrow, oblong tin which has been lightly greased and sprinkled on the inside with granulated sugar. Bake in a moderate oven—350° F. This also makes a good layer cake. (Credit Boston Cooking School.)

Corn Cup Cakes

Ingredients

1 cupful cornmeal
⅔ cupful boiling water
½ level teaspoonful salt
¼ cupful vegetable shortening, scant
½ cupful sugar
1 cupful wheat flour
2 eggs
4 level teaspoonfuls baking-powder
⅔ cupful milk, scant

TIME: Preparation, 40 minutes; baking, 25 minutes
NUMBER SERVED: Recipe makes 12 cakes

PUT meal into a bowl, add salt, shortening, boiling water; mix; let stand thirty minutes or longer. Now add sugar, egg yolks, baking-powder, milk, flour; beat well; fold in carefully stiffly beaten whites. Pour into hot, greased gem-pans, and bake in a moderately hot oven. Serve fresh. These are delicious for supper with hot cocoa and stewed fruit; also good for the school lunch basket.

Come Again Cake

Ingredients

1 cupful granulated sugar
½ cupful brown sugar
½ cupful syrup or honey
1 cupful flour; 3 eggs
¼ pound cooking chocolate, grated
1 level teaspoonful cloves
1 level teaspoonful allspice
1 level teaspoonful cinnamon
¼ level teaspoonful salt
1 level teaspoonful baking-powder
¼ pound chopped almonds, not blanched

TIME: Preparation, 15 minutes; baking, 45 minutes
NUMBER SERVED: Recipe makes one large loaf

BEAT eggs without separating; add sugar, syrup, chocolate, salt, spices, baking-powder, flour, nuts; mix well. Pour into a square, shallow pan lined with floured paper. Bake in a moderate oven (340° F.) until dry on the surface and a rich brown color. When done, and while still warm, cut into strips; then remove from pan, pulling off the paper. This should be sticky on the inside, with a sugary crust. Good for picnics.

Liberty Fruit Cake

Ingredients

1 level teaspoonful baking-soda
⅔ level teaspoonful salt
1 tablespoonful warm water
½ cupful sour cream
½ cupful sour milk
¾ cupful brown sugar
½ cupful molasses
1½ cupfuls rye flour
1 level teaspoonful ground cinnamon
½ level teaspoonful ground allspice and ginger, each
1½ cupfuls seeded raisins, floured
½ cupful sliced citron and figs, each
1 cupful white flour, about

TIME: Preparation, 25 minutes; baking, 1 hour
NUMBER SERVED: Recipe makes one large loaf

DISSOLVE soda in warm water; add salt, sour cream, milk, molasses, sugar, spices; mix well. Add flour gradually, beating until smooth; stir in floured fruit. Pour into a greased baking-pan; bake in a moderate oven.

Lace Cookies

Ingredients

2 eggs
¼ level teaspoonful salt
½ cupful granulated sugar
½ cupful syrup or honey
⅛ teaspoonful vanilla
½ tablespoonful melted fat
1¾ cupfuls rolled oats
¾ cupful shredded cocoanut

TIME: Preparation, 10 minutes; baking, 20 minutes
NUMBER SERVED: Recipe makes 30 cookies

BREAK eggs into a bowl; beat well; add salt, sugar, syrup, vanilla; beat. Add fat, oats, cocoanut; mix. Drop in small teaspoonfuls onto a lightly greased cooky-pan; bake in a very moderate oven until a light golden brown. When properly baked these are deliciously sticky and crisp—a cake, candy, and food "in one." With fresh fruit, a good dessert. The fat may be omitted entirely, if desired. One cupful sugar may be used in place of part sugar and part honey.

Christmas Jumbles

Ingredients

½ cupful butter substitute
1 cupful granulated sugar
½ level teaspoonful salt, about
Juice and rind of 1 orange
1 egg
2 cupfuls white flour, about
½ cupful rye flour
4 level teaspoonfuls baking-powder
Shredded cocoanut
Orange marmalade

TIME: Preparation, 25 minutes; baking, 15 minutes
NUMBER SERVED: Recipe makes 35 cookies

CREAM shortening; add salt, sugar, mix. Add egg, beaten without separating, and orange juice and rind; beat well. Add baking-powder, and enough flour to make a stiff dough. Roll into a thin sheet; cut into fancy shapes; brush with beaten white of egg and water; place a little orange marmalade in center of each cooky; sprinkle with shredded cocoanut. Bake in a moderate oven. Chopped walnuts or pecans may be used in place of cocoanut.

MISCELLANEOUS DISHES

Easily Prepared, and Good for Fuel and Labor-saving Meals

Sardine Canapes

REMOVE skin and bones from a can of good quality sardines. Rub sardines to a paste, season with pepper, a few drops of lemon juice, and a few drops of Worcestershire sauce. Add half a dozen finely chopped pimento olives. Have ready small, thin triangles or rounds of bread, toasted on one side. Butter the untoasted side lightly, spread generously with the sardine paste. In the center of each canape place one whole pimento olive, and top with a little white or yolk of hard-cooked egg pressed through a sieve.

Ripe Olive Sandwiches

TO fresh cottage cheese add an equal quantity of chopped ripe olives. Moisten with a little cream. Spread between thin slices of bread. Cut into fancy shapes.

Scotch Woodcock

SPREAD thin slices of hot toast *lightly* with anchovy paste. Cover each slice with a spoonful of scrambled egg, sprinkle with chopped parsley. Serve at once.

Horseradish Cream

MIX three level tablespoonfuls grated horseradish, one tablespoonful vinegar, one-fourth teaspoonful salt, one-sixth teaspoonful paprika; add one-half cupful whipped cream. Serve with sliced cold beef or tongue. If bottled horseradish is used, press dry and omit vinegar.

Magic Aspic

SOAK one-half box granulated gelatine in one-half cupful cold water. When soft, add two cupfuls boiling water in which three bouillon cubes have been dissolved; add a few drops onion juice, the juice of half a lemon, and strain into a shallow pan. Set in a cold place to harden. An excellent spring garnish for cold meat dishes.

Marrow Balls

Ingredients

4 level tablespoonfuls beef marrow	Soft bread-crumbs
2 eggs	Chopped parsley
Salt; pepper	A little grated nutmeg

TIME: Preparation, 15 minutes; cooking, 5 minutes
NUMBER SERVED: Recipe makes 12 small balls

REMOVE marrow from an uncooked beef shin-bone. Heat gently until melted; strain; stand aside until cold. Beat this to a cream; add eggs, unbeaten, seasoning, and parsley; mix. Now add all the soft, stale bread-crumbs the mixture will hold. Shape into small balls; let stand in a cold place until firm. Serve as a garnish with beef or chicken soup. To cook: Drop balls into the hot soup, and simmer gently until balls float. This will take about five minutes. Marrow is a good fat, and should not be wasted these days. Balls may also be used as a garnish for spinach.

Cheese Marguerites

SPREAD small whole-wheat or graham crackers with currant, quince, or any other favorite jelly. Press a small, dry cream cheese through a sieve. Place a spoonful of this cheese in the center of each wafer. Top with a salted peanut. Serve with salad. Cottage cheese may be substituted for cream cheese.

French Toast

BEAT two eggs, add one cupful milk, one-fourth teaspoonful salt; mix. Cut stale bread into slices, removing crusts. Dip into milk and egg, allowing it to remain until soft. Sauté in nut butter until brown on both sides; or toast, in gas oven, and spread with butter. Sprinkle with powdered sugar and cinnamon. Serve plain or with stewed fruit.

Caramelled Bananas

PEEL ripe bananas; cut into halves lengthwise. Put three level tablespoonfuls nut butter (or other vegetable shortening) into a frying-pan; add an equal quantity molasses. Heat slowly—there should be enough to well cover bottom of pan; lay in bananas. Cook carefully until brown on one side; turn, and brown other side. Serve warm with poultry, in place of potatoes; or as a dessert.

Spiced Windfalls

USE well-flavored, juicy, red apples. Wash, cut into quarters, remove core, do not peel. Stick a clove or two into each piece. Fill a deep, earthen baker with the apples, cover with brown sugar through which a little cinnamon has been mixed. Add a spoonful or two of water; bake in a moderate oven until soft and sticky. Serve warm with poultry, or as a luncheon dessert with war bread.

Caramelled Apples

PARE, core and cut large apples crosswise in one-third-inch slices; cut each slice in half. Put two *level* tablespoonfuls butter, two of water, and four of brown sugar into the chafing-dish. When hot, add apples, cook slowly and turn until apples are tender and brown on both sides.

Candied Cranberries

PICK over and wash the berries. Put them into an earthen baking-dish. Cover with sugar, allowing about one cupful to each three cupfuls of berries. Add half a dozen cloves, or more; bake in a moderate oven one hour, or until berries are tender and clear-looking. Keep the dish covered for the first fifteen minutes. These are delicious, easily prepared, and somewhat resemble candied cherries. Excellent with turkey or other poultry.

Prunes and Barley

SOAK fine pearl barley overnight in cold water. Next morning cook until tender, adding water and salt, as necessary. Remove from fire, drain off any excess water (saving this for soup), and mix with the barley an equal quantity of carefully stewed prunes. Sweeten with a little brown sugar; let all heat together a few moments. Serve warm for breakfast or supper with milk or cream. Excellent for children.

Nut-Honey Sandwiches

TO one-half cupful honey add all the finely chopped mixed nuts it will hold. Pecans and walnuts are particularly good. Spread between thin slices of oatmeal-rye bread lightly spread with cream cheese.

Fig Filling

Ingredients

½ pound figs
½ pound seeded raisins
¼ cupful sugar
¼ cupful water
Grated rind half a lemon
1 tablespoonful orange juice

TIME: Preparation and cooking, 20 minutes
NUMBER SERVED: Recipe makes 2 cupfuls filling

SCALD figs if necessary. Chop figs and raisins very fine, or put them through the meat-grinder. Add sugar, water, lemon rind, and cook slowly, stirring until fruit is thick and smooth. Remove from fire, add orange juice, cool slightly, and it is ready to use. An excellent filling for white cake, or for "filled" cookies (cookies put together with the filling between and then baked), or for fancy sandwiches.

Iced Chocolate

Ingredients

1 quart water
1 quart milk
¾ cupful powdered cocoa
¾ cupful granulated sugar
2 cupfuls whipped cream
1 teaspoonful vanilla
Shaved ice

TIME: Preparation and cooking, 20 minutes
NUMBER SERVED: 10–12 persons

MIX cocoa and sugar, add a little of the water, mix to a paste, add remainder of the water. Bring this to the boiling-point, boil for three minutes, add the milk and bring to the boiling-point again. Remove from the fire, cool, add vanilla. Strain into tall glasses half full of crushed ice; top each glass with a spoonful of whipped cream. This chocolate is simpler to make than ice-cream, and quite as enjoyable. Recipe is easily divided.

Lemonade Syrup

BOIL four cupfuls sugar, the chipped yellow rind of four lemons, with one quart water for ten minutes. Cool, strain into a jar or bottle, cover, and keep on hand in refrigerator. When lemonade is needed put two tablespoonfuls syrup into a tall glass, add the juice of a lemon, plenty of shaved ice, and fill with water. Top with a slice of lemon or one or two berries. If small glasses are used, half a lemon is enough. Orange or other fruit juice may be substituted for lemon. Prevents sugar waste.

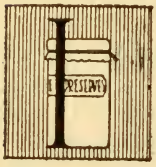
Ice Cream Sauce

BEAT one egg yolk until light; add one-fourth cupful confectioners' sugar, and one-half cupful cream, whipped—but not too stiff. A delicious sauce, very easily made. Good with tapioca puddings, fruit jellies, or sliced fresh fruit. With fresh strawberries or sliced bananas, or these two fruits combined, it makes a dish that is as good as ice-cream, is much less trouble, and requires less cream.

X

PRESERVING AND STORING FOOD

Prevent food waste by being ready to can, preserve, dry, pickle, salt, or store surplus fruits and vegetables. See that everything needed is at hand and ready to use. Do not have an empty container in your home as winter approaches.—From United States Department of Agriculture.



IF food products are left in their natural state, most of them spoil in a few hours or a few days, owing to the growth on their surface or in their tissues of bacteria, molds, or other organisms of decay. If such organisms can be killed, and the entrance of other organisms prevented, the food can be kept in good condition practically indefinitely. [1]

There are many methods of preserving surplus food against future need—canning, drying, jelly-making, sweet "preserves," salting, smoking, pickling, also natural storage and refrigera-

[1] Bulletin 839, United States Department of Agriculture.

tion. Of these, canning, drying, and storing are, perhaps, the most economical and practical for general home needs and common practice; jelly-making, and some forms of pickling, are desirable at times. The proper curing of meats requires special knowledge and skill, and should not be attempted without this. Under the present food stress, whatever method will best conserve possible food waste and produce greatest returns for the time and money spent—including materials, fuel, and containers—should be favored. Food not properly preserved, whatever the method followed, is wasted rather than conserved.

Reliable instructions and excellent recipes for all usual home methods of preserving food may be found in the books and bulletins listed at the close of this chapter. The following summary of principles and methods used in canning, jelly-making, drying, and storing may be helpful, however, and serve as a background for the successful application of more detailed knowledge.

CANNING:

Principles:

The important point in the canning of foods, whatever the method employed, is the destruction of all organisms—in any state of development—which may be present on or in the food, and to prevent, by means of proper protection,

all further contamination. In canning, this destruction of organisms is accomplished by means of heat, and is known as *sterilization.*

Method:

The *cold-pack* method is now accepted as the easiest, quickest, and surest method of canning fruits, vegetables, meats, fish, and soups. It is taught by the United States Department of Agriculture to canning clubs all over the country. It is also the method in use in commercial canning factories. The sterilization, completed in a single period, is done after the food is packed in jars or cans, and partly sealed, so that bacteria or spores cannot enter containers again after sterilization is completed. The process is the same for all foods, the only variation occurring in the preparation of the food previous to packing, and in the time required for complete sterilization. This cold-pack method includes the following steps:

Assembling equipment; cleaning containers.

Grading, washing, special preparation of food as necessary.

Blanching in live steam, or boiling water. This is similar to parboiling; it varies in time from one to possibly fifteen minutes, according to quantity handled; it cleanses, removes bitter qualities, softens fiber. A cheese-cloth bag or wire basket is used for holding the food.

Quick dipping in very cold water—about fifty degrees Fahrenheit; draining.

Packing in clean, hot jars; adjusting new rubbers; filling jars *at once* to overflowing with boiling water or syrup; adjusting covers *immediately;* partial sealing.

Placing hot jars *at once* in canning outfit, and surrounding with hot water as required, according to outfit used; covering outfit.

Sterilizing in water-bath or steam-pressure outfit, as preferred, for such time as may be necessary.

Removing jars from outfit, securing lids; inverting to cool, testing joints, labeling, wrapping, storing.

Equipment for cold-pack canning:

For sterilizing, either a home-made water-bath outfit, or a commercial water-bath, water-seal or pressure-cooker may be used.

For small-quantity canning, the home-made outfit is practical. For this either a wash-boiler, large tin pail, or aluminum double roasting-pan may be used. It is necessary to place a rack in the bottom of the kettle on which to rest the jars. The rack used must permit water to circulate underneath; wood is best; do not use straw or cloths. Lifting-handles and a tight cover are essential. *The water must surround every jar, circulate between the jars, and cover tops of jars by at least one inch. Count time after water begins to boil or jump over entire surface; see that water continues to boil during entire sterilizing period.*

For large-quantity canning, commercial canning outfits are most efficient. The water-bath outfits are frequently constructed for out-of-door work which can be of great advantage; these are operated in the same way as the home-made outfits.

Commercial pressure-cookers save time and fuel, and are well adapted for corn, meats, and other foods where complete sterilization is sometimes difficult, and a temperature higher than the boiling-point is desirable. When using a pressure-cooker, water must come up to rack or platform, but not over it; the cooker must be steam-tight, *and operated and regulated according to directions furnished with the particular canner used.*

For containers glass jars are best for home use. Rubbers must be new when used, of the best quality, and tested before using. Other necessary equipment includes a sharp paring-knife, measuring-cup and spoons, a wooden spoon, a wire basket or cheese-cloth bag for blanching and dipping, clean towels, a "lifter" for hot jars, a pail for scraps, a good alarm-clock, and a stove or heating device.

Time for complete sterilization depends upon condition and variety of fruit and vegetables, upon altitude, and upon the type of canning outfit used. Freshly gathered fruit or vegetables require slightly less time than those which have been allowed to stand several hours. For altitudes above one thousand feet, time, as commonly given for steril-

ization, should be increased 10 per cent. for each five hundred feet. When a water-seal or steam-pressure is used, less time is required than when the water-bath outfit is used. A time-table is supplied with each commercial canner sold. When using a home-made water-bath outfit, time as follows:[1]

Soft berries	12 to 16 minutes
Peaches	12 to 16 "
Apples	16 to 20 "
Hard fruits	20 "
Corn	180 "
Peas and lima beans[2]	180 "
String beans	120 "
Greens	120 "
Sweet peppers	90 "
Tomatoes	22 "

Typical Recipes (See Farmers' Bulletin 839):

String beans: Grade; string; blanch in live steam 5 to 15 minutes, according to quantity; dip into very cold water; drain; pack immediately into clean, hot jars; adjust rubbers; fill jars to overflowing with boiling water, adding one level teaspoonful salt to each quart; seal partially. Place jars in canning outfit; surround with hot water as required for the particular outfit used. Sterilize in water-bath outfit one period of 120 minutes; or in water-seal outfit, 90 minutes; or in pressure-cooker—under 5 pounds—60 minutes; or in pressure-cooker—

[1] Arranged from Farmers' Bulletin 839, United States Department of Agriculture.

[2] If very young and freshly gathered, less time may be required.

under 10 pounds—40 minutes. When sterilization is complete, remove jars at once, tighten covers, invert to cool, test, wrap in paper, store.

Clear boiling water, with one level teaspoonful of salt to each quart, is used for all vegetables with the exception of tomatoes; these require no water.

Peaches: Wash, grade, peel,[1] halve and remove stones, leaving a few for flavor; rinse. Pack fruit at once into clean, hot jars; fill jars to overflowing with boiling syrup—thin or medium thin; adjust rubbers; seal partially. Place in canning outfit, and surround with hot water as required for the particular outfit in use. Sterilize in water-bath outfit, 16 minutes; or in water-seal outfit, 10 minutes; or in steam-pressure outfit —under 10 pounds—5 minutes. Remove jars at once, secure lids, invert to cool, test, wrap, store.

Fruit may be canned with clear water, sugar syrup, or in cases, with a diluted corn syrup. In making sugar syrup, the density may vary from thin to medium or thick, according to kind of fruit to be canned, special need for economy, or individual taste. For sweet fruits—sweet berries, peaches, cherries—use thin syrup; for sour berries and other sour fruits, use medium-thick syrup; for hard fruits—pears, apples, quinces—thin to medium-thin syrup may be used.

[1] This may be done by immersing fruit in boiling water, one or two minutes, until skins "slip easily," then dipping into cold water and removing skins.

Thin syrup is sugar and water boiled just long enough to dissolve all of the sugar; it is not sticky. Such syrup has a density of from 12 to 20 per cent. To make it use about 1 cupful sugar to 5 cupfuls water.

Medium-thin syrup is that which has begun to thicken and becomes sticky when cooled on the tip of a spoon; it has a density varying from 20 to 40 per cent. To make it, use about 1 cupful sugar to 3 cupfuls water.

Medium-thick syrup is that which has thickened enough to roll up over the edge of the spoon when it is poured out; its density varies from 40 to 50 per cent. To make it, use 1 cupful sugar to 1 cupful water.[1]

Only an expert in canning should attempt meats and soups. Instructions may be obtained from the United States Department of Agriculture.

To insure success in all canning, observe the following:

Use of sound, fresh food only.
Careful preparation; quick work.
The complete filling of jars or cans.
Surgical cleanliness in every detail.
Complete sterilization.
Correct timing; an alarm-clock is helpful.
Perfect sealing.

[1] Farmers' Bulletin 839, United States Department of Agriculture, contains a very exact "syrup table," as well as detailed recipes and instructions for the canning of fruits, vegetables, meats, soups. The facts as outlined have been arranged largely from material published in this bulletin.

Never use artificial preservatives or canning "compounds" or "powders." These are unnecessary, many are harmful, and their use is forbidden or restricted in many states and by the national government.

JELLY-MAKING:

Principles:

Jelly is made by combining strained fruit juice and sugar in certain correct proportions, determined by the quality of the fruit juice, and boiling this for a definite length of time. Good jelly depends upon the care and success with which this is accomplished. "A good jelly should be bright, of good color, and clear. When removed from the glass and cut, it should retain its shape. It should sparkle, and be tender enough to quiver without breaking."

There are two properties that should be present in fruit juice in order to make perfect jelly; these are *pectose* or *pectin* and *acid*. Pectose or pectin is the "essential jelly-making material"; acid is desirable largely for flavor.

Pectose is an insoluble body present in fruits when under-ripe; as fruit ripens, pectose is converted into pectin. It is this substance which unites with the sugar, during the process of jelly-making, and solidifies or "jells" on cooling. Pectose unites with sugar more readily than pectin, therefore fruit that is slightly under-ripe makes the better jelly. Fruits with little pectin and much acid do not make good jelly.

Fruits commonly rich in pectose or pectin include guavas, quinces, some apples, crab-apples, partially ripened grapes, black currants, and red currants when not over-ripe. There is also pectin in the white portion of orange peel, and in green citron melon. Raspberries, elderberries, even blueberries [1] when in good condition, can be made into jelly.

Fruits lacking in pectin include strawberries, peaches, cherries, rhubarb. These are not desirable for jelly, unless other fruit juice rich in pectin, such as apple, is added to them.

The best jelly is made from slightly acid fruit juice, rich in pectose or pectin, with just the right amount of sugar added to unite with the pectose or pectin, and consequently "jell" properly. If too much sugar is added for the pectin present in the juice, the result will be syrupy rather than solid, with possibilities of crystallization; if too little sugar is added, the jelly will be tough. Jelly is apt to be spoiled, however, by using too much rather than too little sugar. The correct proportion varies, approximately, from ¾ to 1 cupful of sugar to each cupful of juice. Except in the case of currant jelly, ¾ is usually the better measure.

To prevent waste of sugar and fruit, and to insure a good jelly, it is sometimes wise to test the collected fruit juice for pectin before making

[1] "Principles of Jelly-Making," N. E. Goldthwaite, Ph.D., Bulletin, University of Illinois, Urbana, Ill.

it up into jelly. The United States Department of Agriculture gives the following test:

> Put 1 tablespoonful 95 per cent. grain alcohol and an equal quantity of cooled fruit juice into a glass tumbler; shake gently; let stand for half an hour. The effect of the alcohol is to bring the pectin together in a jelly-like mass.
>
> If much pectin is present, it will appear in one mass or clot when poured from the glass; this indicates that equal quantities of juice and sugar may be used—1 cupful sugar to 1 cupful juice.
>
> If pectin is separated in small clots, not slipping from the glass in one mass, less sugar will be required—¾ cupful sugar to 1 cupful juice.
>
> If pectin is very thin, and much separated, the juice is hardly desirable for jelly-making; it may be improved, however, by cooking apples, the white portion of orange rind, or some green citron melon with it, or adding other fruit juice rich in pectose or pectin.

Correct time for boiling the fruit juice and adding the sugar at the proper moment are also important factors. Some jelly may be made complete in 10 or 15 minutes; other jelly may require 20 or 30 minutes. The sugar—heated—should be added to the juice midway in the process, or a little toward the end—as nearly as can be determined.[1] The whole process

[1] This point is debatable, however, and is best decided by individual preference or success.

of jelly-making should be done as quickly as it consistently can, however; to insure this, work in small quantities. Long cooking tends to destroy the pectin; the action of the acid on the sugar during long cooking is also unfavorable, producing in the end a syrup rather than a jelly.[1]

Method:

Jelly-making includes the following steps:

1. Extracting the juice from the fruit:

To extract juice from soft, watery fruit—currants, raspberries, ripe grapes, etc.—place fruit, washed as necessary, in a clean, large white-enameled or aluminum kettle; heat gently, stirring and mashing as fruit softens. To prevent scorching, the addition of a very little water is sometimes advised; this should not be necessary, however, and the juice is better without. A little water is sometimes added to grapes, particularly when under-ripe. Currant juice is sometimes extracted by crushing the fruit without previous heating. Fruit juice "will flow more readily," however, when heated, and the heating or cooking, up to a certain point, apparently develops the pectin.[2]

[1] Bulletin 853, United States Department of Agriculture. Also, "Principles of Jelly-Making," N. E. Goldthwaite, Ph.D., Bulletin, University of Illinois, Urbana, Ill.

[2] Bulletin 853, United States Departmen tof Agriculture. Also "Principles of Jelly-making," N. E. Goldthwaite, Ph.D., Bulletin, University of Illinois, Urbana, Ill.

To extract juice from hard fruits—apples, quinces, etc.—place prepared fruit in a kettle, and barely cover with water—allowing, approximately, from 1 to 2 cupfuls of water to each pound of fruit, according to kind and condition.

Interesting jellies, both in color and flavor, may be made by variously combining different fruit juices, adding spices, or the leaves of different plants—such as mint, sweet geranium, cherry.

2. Straining and measuring the juice; testing for pectin, if desirable; measuring sugar; placing sugar in pan ready for heating.

3. Boiling juice previous to addition of sugar:

   This is done to clarify juice, evaporate unnecessary water, and to reduce time of cooking after sugar is added.

4. Adding sugar to boiled fruit juice:

   Sugar should be hot when added, so as not to check the boiling and unnecessarily lengthen the cooking process.

5. Testing for "jelly":

   This is the critical point in jelly-making, and is best understood and mastered through experience; it may occur any moment after sugar is added, and should be anticipated, as over-cooking is disastrous. Syrup boiled beyond the "jellying"-point becomes thin

and "syrupy." Syrup that refuses to "jell" cannot be improved by long cooking or the addition of more sugar; it can sometimes be improved by the addition of more good fruit juice.

To test for jelly, examine syrup as it cools on the spoon used for stirring; if syrup clings to the spoon and forms a sheet, remove jelly at once from fire.[1]

A thermometer may also be used for testing, but since the temperature at which the "jellying"-point occurs varies in different fruits, or according to the condition of the fruit juice, the thermometer test is not necessarily infallible; good syrup usually "jells" approximately between 220° and 224° Fahrenheit.[1]

6. Filling glasses:

When jelly is ready, pour immediately into hot sterilized glasses. Let cool rapidly in a clean, dry place, protecting jelly with a light cheese-cloth.

7. Sealing:

When cold, cover jelly with hot, melted paraffin. Tin or paper covers may be used for extra protection. Labeling is attractive and prevents confusion.

[1] See "Principles of Jelly-Making," N. E. Goldthwaite, Ph.D., Bulletin, University of Illinois, Urbana, Ill.
Also, Farmers' Bulletin 853, United States Department of Agriculture.

Equipment for jelly-making includes:

A small stove or heating device, clean towels and paper; sharp paring-knives, pail for scraps, white-enameled or aluminum kettle, measuring-cups, scales, wooden spoons, bag or cheese-cloth for straining jelly, clock for timing, thermometer or syrup-gauge, jelly-glasses or paraffin-paper cups, paraffin, covers, labels.

To insure success in jelly-making:

Use fresh, sound fruit, not over-ripe, rich in pectin and slightly acid.

Measure correctly; proportion sugar to juice properly.

Work quickly.

Do not over-cook syrup.

Pour jelly, when ready, immediately into sterilized glasses.

Seal as soon as cold and set; keep in a clean, dry, light place.

JAMS, FRUIT BUTTERS, MARMALADES:

These should be specially considered during the present food shortage. They are more economical than jelly as all of the fruit is used, fruit otherwise good but not desirable for jelly can be used, and less sugar is required. While the process is similar to that of jelly-making, it is less exacting, and there is little opportunity for waste or error.

JAMS AND MARMALADES PREVENT FRUIT WASTE

The fruit is cooked with just enough water to soften it—soft fruits and berries require no water—the whole rubbed through a colander or press, measured, sugar added—in any proportion from one-third to one cupful of sugar to each cupful of fruit pulp—and the whole cooked until rather clear and thick, and then poured into jars or glasses, and sealed when cold.

Interesting and economical products can be made by combining two or more fruits. Certain vegetable marmalades are also practical, and can be made at small cost.[1]

DRYING FRUITS AND VEGETABLES:

Principles:

Drying or "dehydrating" is the process of extracting the water—present in large proportions—from fruits and vegetables. When treated in this way, they can be kept almost indefinitely.

Before cooking, the water must be restored by soaking, or the food "reconstituted," as it were.

Drying very greatly reduces weight and bulk; the cost of packing and shipping—if necessary—is consequently small, and little storage room is required. Moreover, the method is inexpensive, and requires comparatively little skill, although care and judgment must be used. Quantities of food which may be too small to can conveniently—a small surplus from the

[1] Leaflet NR-27, United States Department of Agriculture, contains excellent recipes for vegetable marmalades.

garden or market-stand, or left-over bits from the kitchen—may be saved in this way. For purposes of transportation or for the city home, which may have little or no provision for storing fresh or even canned food, the advantages are particularly apparent.

Method:

Three methods are practical. Sometimes a combination of two, or even three, is used. Food to be dried may be placed on open rack trays in the sun, or exposed to artificial heat, or dried by air-blast; in the home this may be created by a natural draught of air, or by artificial means such as an electric fan.

Either home-made or commercial driers may be used. Food should be carefully cleaned before drying, and protected from dust and insects while drying. Cutting or shredding saves time. The time required varies; the process should be slow enough so that the cut surfaces are not hard and dry before the inside is sufficiently dry; at the same time, the drying should not be so slow that souring may result. The temperature is important when artificial heat is used. A very gentle heat is best at first, possibly 70° Fahrenheit; this should be gradually increased as moisture escapes to 140° Fahrenheit. The circulation of air through and over the food is as important as heat. Food should be tossed and turned frequently while drying.

When properly dried and "conditioned," the food should be packed in small, air-tight

A HOME-MADE DRYING OUTFIT THAT IS PRACTICAL AND INEXPENSIVE; ON WARM, BRIGHT DAYS A FIRE IS NOT NECESSARY

paper bags, boxes, or paraffin-paper cartons. Not more than enough food for one or two meals should be packed in each container.

Equipment:

Equipment for home-drying is fully described and illustrated in Farmers' Bulletin 841, published by the United States Department of Agriculture.

The home-made outfit illustrated opposite page 206 is novel, practical, inexpensive, and most efficient for comparatively large quantities for household use.

"Community drying," in a special house or plant built for the purpose of drying fruits and vegetables, has been adopted in some states. This "drying-house" may be rented as needed.

"Itinerant drying" is also receiving attention.

Foods suitable for drying include apples, peaches, cherries, plums, some berries, beans, cabbage, celery, corn, onions, parsley, parsnips, potatoes, pumpkins, squash, turnips—and others.

STORING:

Many fruits and vegetables may be kept by natural storage in a dry place of the proper temperature, either indoors in the cellar, sometimes in a "vegetable-attic," or out of doors in properly prepared pits or trenches. Foods suitable for natural storage include, principally, apples, pears, potatoes, and

the common winter vegetables such as beets, cabbage, carrots, onions, turnips, etc.

For the country home with a garden, winter vegetables suitable for storing should be planned for and grown to the extent of family needs for winter use. Natural storage is simpler and cheaper than either canning or drying, and should be favored whenever practical.

REFERENCES:

The facts as outlined in the preceding chapter have been arranged largely from material published by the United States Department of Agriculture; full credit is given. For more detailed information, and further practical help, the following publications are earnestly recommended:

"Home Canning by the One Period Cold-Pack Method," Farmers' Bulletin 839.

"Home Canning of Fruits and Vegetables," Farmers' Bulletin 853.

"Home-made Fruit Butters," Farmers' Bulletin 900.

"Preservation of Vegetables by Fermentation and Salting," Farmers' Bulletin 881.

"Drying Fruits and Vegetables in the Home," Farmers' Bulletin 841.

"Home Storage of Vegetables," Farmers' Bulletin 879.

"A Successful Community Drying Plant," Farmers' Bulletin 916.

NOTE.—These bulletins may be obtained free of cost, or for a nominal sum, by addressing the Division of Publications, Government Printing Office, United States Department of Agriculture, Washington, D. C.

"Principles of Jelly-Making," N. E. Goldthwaite, Ph.D., Bulletin, University of Illinois, Urbana, Ill.

Successful Canning and Preserving, Ola Powell.

NOTE.—A most comprehensive and complete volume, particularly practical and inspiring because of its one hundred and sixty-four illustrations, and the questionnaire and bibliography at the close of each chapter. To those really interested in the successful preserving of food—whether by canning, jelly-making, pickling, or drying—such a volume is invaluable.

"Ten Lessons on Food Conservation," Bulletin, United States Food Administration.

Recipes and excellent suggestions for preserves, jellies, pickling may be found in:

The Boston Cooking-School Cook Book, Fannie Merritt Farmer.

A New Book of Cookery, Fannie Merritt Farmer.

Canning, Preserving, Jelly-Making, Janet M. Hill.

Cooking for Two, Janet M. Hill.

Canning and Preserving, Marion Harris Neil.

XI

A KITCHEN THAT WILL HELP YOU

Probably the greatest aid which can be rendered the woman of the future as a housekeeper will be furnished by the American domestic architect. Whether man or woman, the builder of American homes in the future will make a very special study of the convenience and comfort of women in relation to their household problems.—*The Craftsman Magazine.*

INCE the sane and sound theory that household service is really a source of national wealth has been growing, and since women are now realizing the money value of their own time and strength, at the same time electing to do housework themselves rather than submit to the wearing effect of the old order of irregular and unskilled help —with its attendant waste—the attractive, well-planned kitchen has at last been recognized as a necessity. In fact, a housekeeping workshop built and equipped so as to conserve to the utmost the housekeeper's energy and time, guaranteeing worth-while, happy accomplishment, is in constant

demand. Even where professional service can be employed by the hour, and the housekeeper herself relieved of the greater portion of the work, fitting kitchen conditions are an important element in the successful development and definite establishment of this progressive and reasonable means of getting the housework done. Architects, builders, and manufacturers of household equipment are co-operating to meet this new kitchen need, and have already succeeded in accomplishing much.

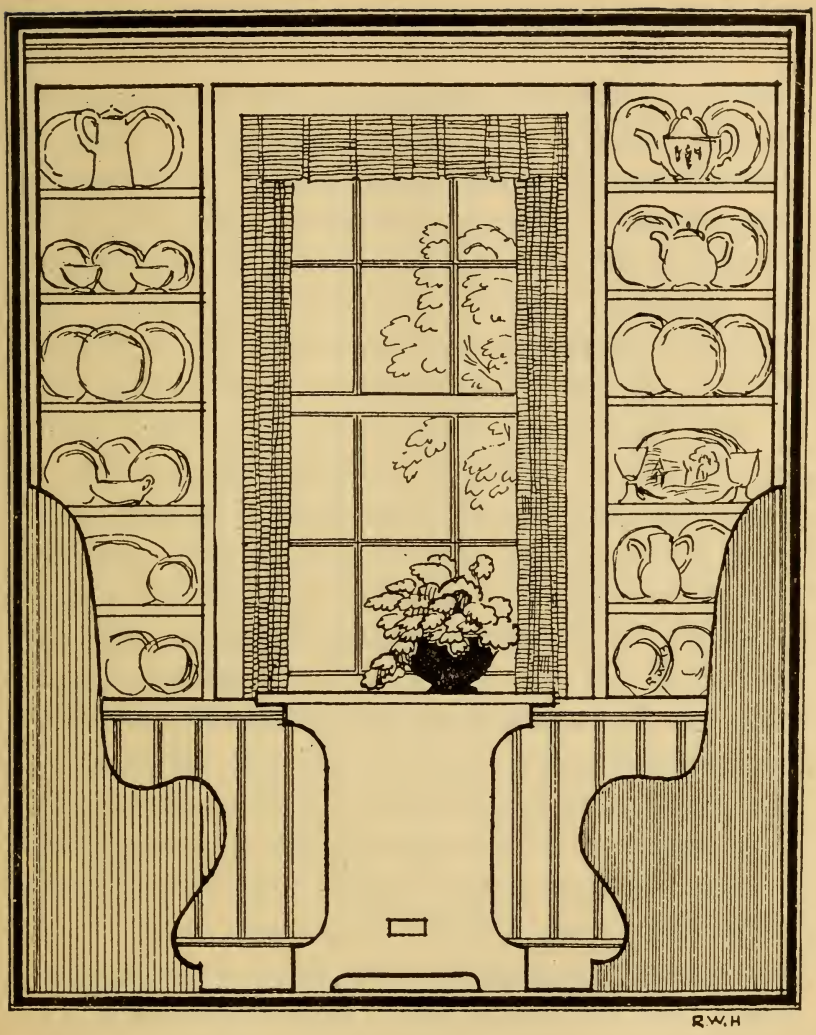
An ever-present cleanliness easily maintained, compact convenience, based on fundamental attractiveness, are the new standards, while the principal features of a desirable kitchen might be summed up as follows:

Favorable location in relation to exposure.
Convenient location in relation to house as a whole.
Pleasant outlook.
Proper ventilation.
Good lighting, both natural and artificial.
Light-colored, easily cleaned, durable surfaces.
Compact floor plan and arrangement of equipment, facilitating the natural order of work.
A convenient and normal place for everything, and everything in its place.
Equipment set at a comfortable working height, with working surfaces uniform in height.
Elimination of all unnecessary floor space, angles, corners, surfaces, equipment, utensils.

A rest-corner or alcove.
Attractiveness, both in the effect of the whole as well as in individual equipment.

Money may be an important factor in securing certain ideal conditions, and is usually the determining one when selecting materials and equipment, and yet a good kitchen is not necessarily a costly one. Intelligent, careful planning counts for quite as much as the money which can be spent; in addition, the market is now not only supplied with every conceivable type of satisfactory labor-saving material and device, but is also more or less prepared to offer a choice in style, quality, and size to meet every need and every purse. We have but to ask or look, and what we need, or want, or can afford to pay for can almost always be found.

While the best location for a kitchen is largely controlled by climate and local conditions, one with windows toward the north, northeast, or northwest is usually the most perfect. The light is favorable for working, and there will be sunshine enough during the year, at the extremes of the day, to bring cheer and refreshment, without excessive heat in the summer months. Doors and windows should be so arranged that good lighting, and cross-currents of air insuring perfect ventilation are secured without loss of adequate wall space. In this connection, the high casement



The Dining Alcove

THE WINDOW, A WHITE-ENAMELED TABLE THAT NEEDS NO CLOTH, AND THE SHELVES FOR GAY PEASANT POTTERY MAKE THIS BREAKFAST ALCOVE A DELIGHT

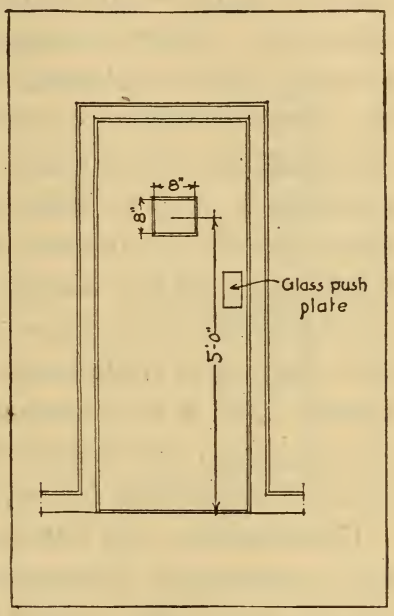
window may have advantages. If possible, guard against a passage through the kitchen which would cut it in half, interrupting compact working conditions. Plumbing should be simple, exposed, and the best that can be afforded is always the cheapest in the end. Where electricity is available, clever wall and floor plugging for electric apparatus can be immensely valuable. Artificial lighting should be carefully thought out.

Kitchen convenience in relation to the life of the home as a whole must also be definitely considered. While it is wise to make special provision for laundry, cleaning, and other work not directly connected with the preparation of meals, these interests should not be too far from the kitchen. Where the family is large and one pair of hands must do all the work, direct communication between kitchen and dining-room, both by door and pass-window—the latter, in connection with shelving for china, located near the sink—is a great step-saver. Under more favorable conditions, a small entry or pantry, setting the kitchen a little apart, may have desirable features. In the country home, the convenient relation of kitchen to both dining-room and eating porch ought not to be overlooked, so that seasonable adjustments can easily be made. A dining-alcove will add a note of quaint, happy charm, and can be most useful.

The food-pantry, with an outside window, should be located on the coolest, yet somewhat protected, corner or side of the kitchen. It should not be too far from the dining-room. If this pantry can, at the same time, be at that end of the kitchen where the work-table and sink are also located, conditions are ideal. Where exposure and general convenience must be considered, however, this is not always possible, and a compromise must frequently be made. This is true in other planning, too, when single convenience must sometimes be sacrificed for the greater convenience of the whole. Moreover, in planning do not let us forget that beauty as an intimate part of convenience deserves consideration, too. That which is harmonious and cheering in effect can rest the nerves and prevent fatigue in quite as definite a way as any step-saving floor plan or labor-saving device. It is wise, further, to remember that living requirements are not alike in all families, nor is kitchen-work necessarily the same from day to day, and, just to this extent, with even the most approved suggestions to follow, individual adaptations must be made and the real efficiency come from the heart of the worker.

Unless one can afford porcelain tiling, a good quality washable paint, on hard plaster—or on metal tiling—in deep ivory, light buff, or a soft,

cheerful gray is the best wall finish, with enameled trim in the same color or in a rich cream-white. This finish is not extravagant and may be repainted when necessary at a reasonable price. While light painted and enameled surfaces may "show the dirt," they are easily cleaned, and there is always the incentive to "keep them clean" because of the buoyant satisfaction that follows the effort. Surely the restful, inspiring joyousness created in the spirit by white enamel paint cannot be ignored. All woodwork, doors, and shelves and any built-in equipment should be smooth and free from grooves, crevices, and corners where dust and dirt may collect. The new kitchen doors that meet this requirement are variously known as *sanitary*, *flush*, or *slab*. The possibilities of metal trim and construction are receiving attention.



THE NEW "FLUSH" OR "SANITARY" DOOR; THE GLASS PUSH-PLATE SAVES CLEANING AND A WINDOW PREVENTS ACCIDENTS

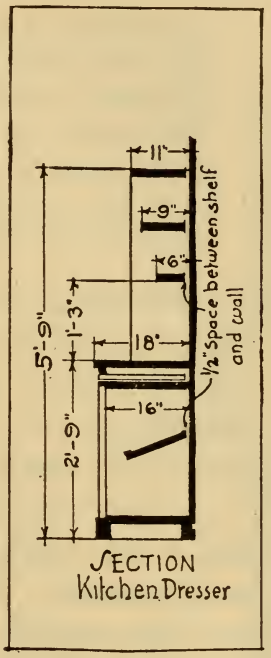
Door and dresser knobs may be of white porcelain or glass.

A good quality linoleum, or floor oil-cloth, attractive in color and pattern—to harmonize with whatever picture scheme one has in mind—properly laid, stretched, fitted, and cemented to the floor, is still considered the most sanitary, practical, and comfortable floor at the price. To preserve it, and to make the cleaning easy, linoleum should be rubbed, when laid, with a good floor wax, and the waxing renewed, as necessary, after the floor has been thoroughly washed. A thin coating of shellac can also be used with good results, and if it is renewed three or four times a year, even an inexpensive oil-cloth will wear without a blemish for several years.

Composition and tile floors are ideally sanitary and indefinitely permanent, but comparatively expensive as well as cold and tiring to stand on. A cork-compound flooring—made in a variety of desirable colors, and laid in attractive block-title designs—combines the good points of both linoleum and tile; it will cost more than the linoleum, however, but less than the tile. A sanitary cove base of tile or composition material is worth some sacrifice in other directions. Such a base prevents corner accumulations, simplifies the cleaning of the entire floor, and is a partial insurance, at least, against

mice and insect troubles. If the floors of pantries and cupboards, and any stair landing leading to the cellar, are treated and finished as part of the kitchen floor, an atmosphere of finished harmony prevails.

Against some such background as this, add your gaily colored pottery cups and plates —in neat, single rows on an open, white-enameled, narrow-shelved dresser — and short, crisp, white, cross-barred ruffles across the window-tops, and there can be no grimy side to kitchen work. Not unless we ourselves may choose to make it so. Even the stairway leading to a basement laundry can be painted a clean, hard, battle-ship gray, and open on a picture that rivals a little piece of stage fairy-land, if we but will to have it so. And loving it and wanting it is almost the most that it need cost us. Let us want it, that is all!



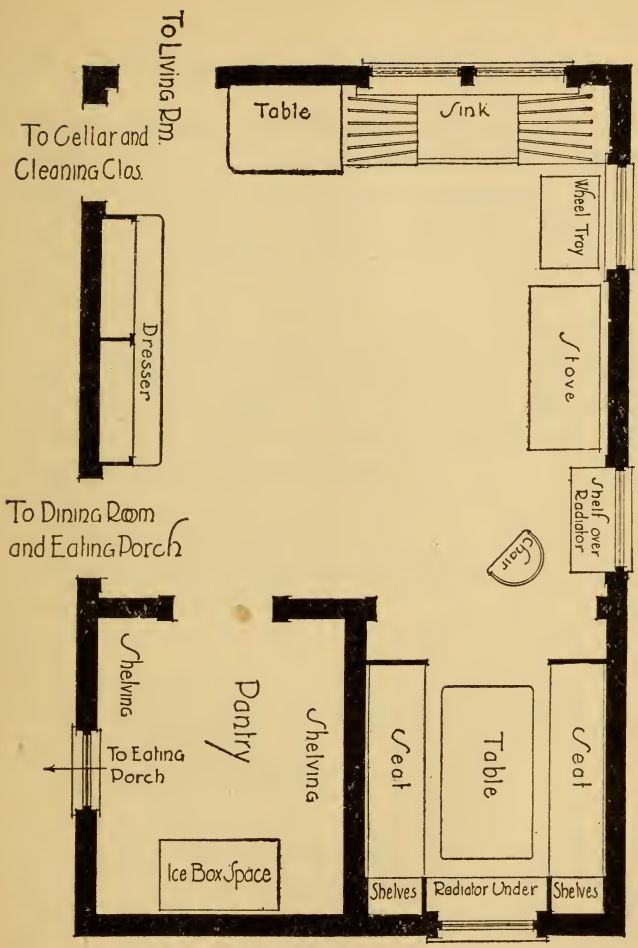
CROSS-SECTION OF DRESSER SHOWING LOWER SHELVES EACH TWO INCHES NARROWER THAN THE ONE ABOVE, PERMITTING CUPS AND PITCHERS TO BE HUNG TO ADVANTAGE. THE "INCLINE" SHELF, IN THE LOWER PART, IS WORTH NOTING— ALSO THE SPACE BETWEEN WALL AND SHELVING

When planning a new kitchen, the size will depend largely on:

Its relation to the house as a whole.
The size of the family.
The uses to which it must be put.
The amount of wall space left for large equipment, after the necessary doors and windows have been provided.
Individual preference.

In remodeling an old kitchen, the best, of course, must be made of conditions as they exist.

Neither the very large nor the very small kitchen can be recommended. In the large kitchen too much walking is required, and there is too much surface to be kept clean. In a kitchen that is too small, overcrowding can cause equal inconvenience. An oblong rather than a square floor plan usually suggests the best arrangement for easy working conditions, although the square kitchen is always happy-looking, and offers a generous corner as a compact working base. Eight feet by 11 feet is a good size for a kitchenette; 10 feet by 12 feet, or 11 feet by 13 feet, or 12 feet by 12 feet, or 11 feet by 14 feet are good sizes for a family kitchen. It is the layout of this floor plan, however, that is so important, as it is the compact, logical arrangement of the working equipment, rather than the actual number of square feet as measured, that really controls the



A KITCHEN FLOOR PLAN THAT SHOWS COMPACT ARRANGEMENT OF WORK-TABLE, SINK AND STOVE, A BREAKFAST ALCOVE, AN OPEN, NARROW-SHELVED DRESSER IN CONVENIENT RELATION TO DINING-ROOM, EATING PORCH AND LIVING-ROOM, AND A FOOD-PANTRY NEAR BOTH DINING-ROOM AND PORCH

number of steps to be taken. Even a very large kitchen may be made convenient and comfortable by confining the working equipment to one end or corner, and dividing off the remaining portion to be used as a breakfast alcove or rest-corner.

Every working unit should be so placed that the common household tasks which are done over and over again—not only every day, but many times every day—can proceed in the following normal, logical order:

The income of food.
Its storage in refrigerator or pantry.
The preparation of food.
Cooking.
Serving.
Dish-washing.
Replacing of dishes on shelves or in cupboard.
Disposal of waste.
Cleaning up of the kitchen.

If this sequence can progress, as far as possible, from left to right, the instinctive method of doing all things, with no or very little recrossing of the room, and that by the shortest way, much time and fatigue usually connected with the preparation of meals can be saved.

In the wisely planned kitchen, for example, one will find:

The food-pantry with refrigerator near the outside entrance.

The work-table or cabinet with utensils, sink, and stove closely grouped, forming a complete unit for the preparation of food, cooking, and washing of utensils and dishes.

Shelves for dishes near the sink, preferably to the left, and in the direct path to dining-room or eating porch.

A wheel-tray, with a permanent nook near both sink and stove, for carrying cooked food to the table, and soiled dishes back to the kitchen sink.

A small, white-enameled refuse-can—with a cover operated by a foot-pedal—near or under the sink.

A small closet, close by, for kitchen-cleaning materials.

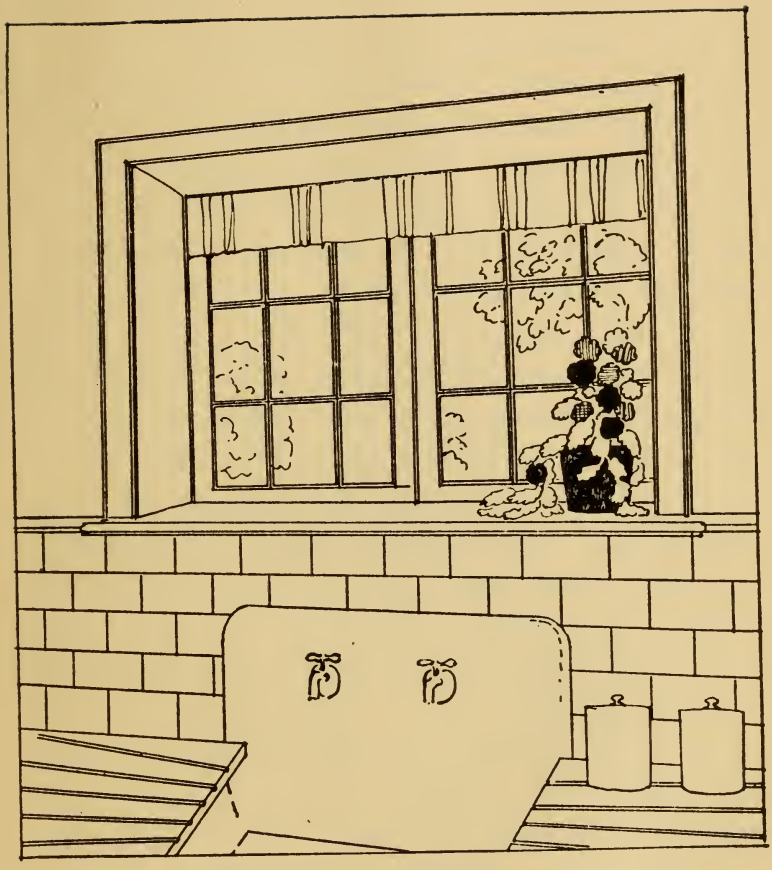
Proper facilities for storage of food and utensils, the work-table, sink, and stove constitute the fixed equipment, and their individual consideration is as important as their relation to one another. This fixed or large equipment should be selected and arranged for service, and economy of operation and maintenance, and should harmonize in finish, color, and outline as far as may be practical with the kitchen plan as a whole. In general, plan or select equipment that is fitted

to the size and needs of the family, that does not occupy unnecessary floor space, and has no complicated or superfluous parts to get out of order. Perhaps the most satisfactory way to make a selection of any needed piece of large equipment that must be purchased is to apply for descriptive catalogues, with price-lists, from manufacturers of reliable articles in which one is interested. From these circulars a careful, comparative study of sizes, cost, principles of operation, and other practical details can be made before coming to a conclusion. Many dealers gladly permit a trial test before the purchase is made; where this can be arranged, it offers additional insurance for future satisfaction.

Kitchen food-storage space must include suitable provision for both perishable and dry foods in current use, as well as a special shelf or small closet, set a little apart, for extra stock or emergency foods. If possible, combine these needs in one large pantry—7 feet by 6 feet is a fair average size—with a window, so that all food-storage interests are confined to the one center. The walls and shelves of this pantry should be finished in a hard, smooth, white-enamel paint, so that wiping and cleaning are always easy. Shelf papers or oil-cloths are unsanitary, and, with painted shelves, unnecessary. The shelves should be spaced, as far as practical,

to fit the articles to be stored, and should be narrow rather than wide—varying in width, approximately, from 6 to 12 inches—so that all articles may be placed in single rows only. This plan automatically prevents disorder. One wider shelf will be needed for bread- and cake-boxes; a cutting-board and knife, conveniently placed, may complete this shelf. Shelving should, further, be so arranged that articles most frequently needed are most easily reached. Shelving that is too high or too low is never practical; 5 feet 6 inches is a good limit for the highest shelf, and 15 inches from the floor for the lowest shelf. Corners of shelves should be rounded, and the shelves fitted a scant one-third of an inch from the wall; this prevents dust accumulation and makes cleaning easy.

Covered glass jars are attractive and practical for dry groceries. For perishable foods, a refrigerator is usually a necessity. The chief points of a desirable refrigerator include easily cleaned, sanitary surfaces, particularly on the inside, a construction that will maintain a low temperature at a minimum ice consumption, with perfect circulation of air currents, and an ice chamber that is easily filled. A well-fitting drain-pipe for carrying off the water is essential. The location of the refrigerator in relation to convenient icing should not be overlooked. Refrig-



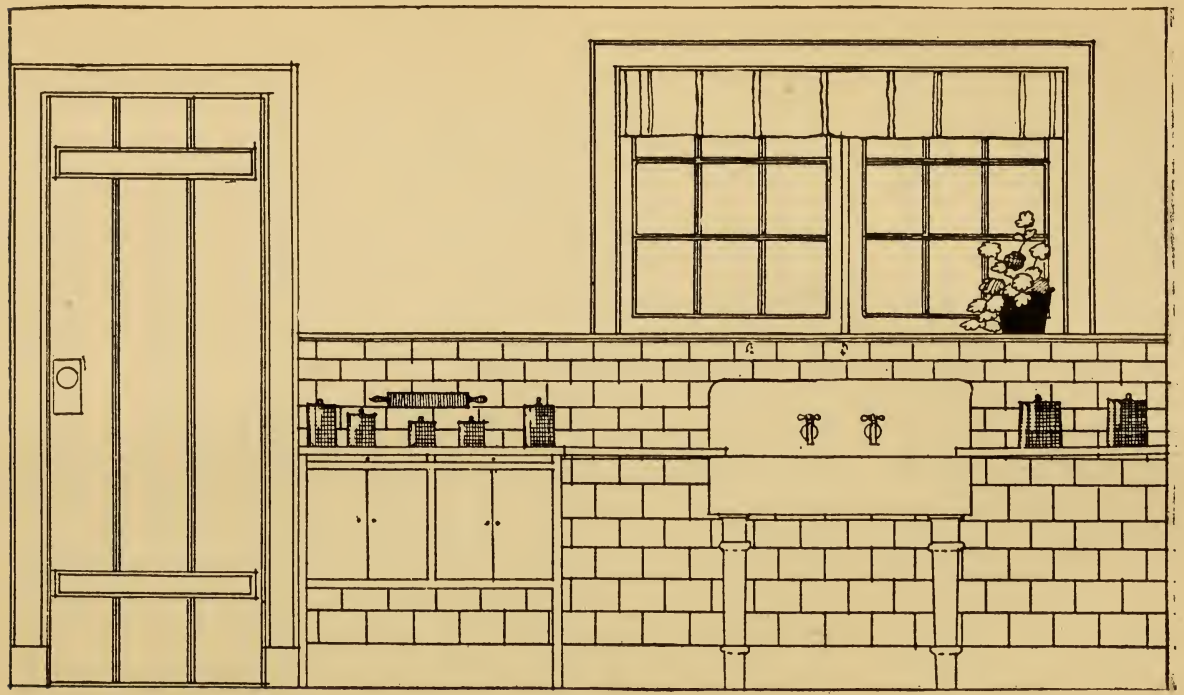
Window over
the Kitchen sink

eration without ice is not yet possible for all, but it is coming.

Food preparation is the next step. This requires food materials, utensils, water, and a practical non-absorbent, sanitary surface, installed at a comfortable working level. Both kitchen floor space and waste effort will be saved if the usual work-table or cabinet and the constantly needed sink, with its two drain-boards, can be combined so as to form one compact working base or unit, the whole—with a deep-silled casement window to light it—within easy reach or stepping distance of the stove. The ideal arrangement is to have the table-top and left-hand drain-board form one continuous working surface, with the water faucets of the sink within instant reach of the right hand, and the sink itself immediately available for such work as vegetable cleaning and the washing of used utensils. A fair average height for this combination table and drain-board level will vary from 33 to 36 inches. This height will bring the inside bottom of the sink approximately from 26 to 30 inches from the floor. In the case of a very tall worker, it may be necessary to raise this level an inch or two. It is difficult to make arbitrary statements, however; whatever height will permit the worker to stand without bending the back, or being otherwise uncomfortable, is correct.

A porcelain or white-enameled sink with integral back and nickeled faucets is desirable. In sinks of this kind there are sizes and qualities and styles to meet every need. Where space will not permit of two drain-boards, the one that can be provided should be placed at the left. Wood drain-boards, while not as sanitary as the new enameled boards, afford the best working surface. The top of the table may be of zinc, nickeloid, white-enameled steel, or a vitrified glass. The white glass is perfect in appearance, but cold and hard to work on, and may crack if suddenly heated. Zinc is durable and inexpensive, but hardly attractive. Where wear is not severe, white enamel paint is sometimes a happy compromise. Add to this a permanent white-glass pastry-board, placed at one end, and you have an excellent table. To preserve the enameled surface, it may be waxed occasionally.

Cleverly grouped in and around this unit, according to individual need and preference, should be found all the smaller utensils and a reasonable supply of such dry foods as may be in constant use. The food may be kept in white-porcelain jars placed in a row across the back of the table-top, or on a narrow, white-enameled shelf immediately over the table. Utensils may be hung on hooks, or arranged on suitable shelving at the side or under the table, as may best fit space and



Side Wall of the Kitchen

SHOWING WORK-TABLE, DEEP-SILLED WINDOW, AND SINK GROUPED AS ONE PIECE, WITH TABLE-TOP AND DRAIN-BOARDS FORMING ONE CONTINUOUS WORKING SURFACE. IN AND AROUND THIS UNIT, UTENSILS AND A REASONABLE SUPPLY OF DRY FOODS IN CONSTANT USE MAY BE ARRANGED TO MEET INDIVIDUAL NEED OR PREFERENCE

preference. In this way, an illogical assortment of food and utensils, which is neither helpful nor attractive, is avoided.

The choice of a stove will depend largely upon the most economical, available fuel. Whatever means or method of cooking will best conserve the fuel-supply of the country, at the same time providing the greatest possible cooking convenience for the home, should be considered. There are few localities where either an oil-, a gas-, or an electric-stove may not be used, and housekeepers who have signed the emancipation proclamation prefer any one of these to a coal-stove. Sometimes the use of more than one stove is the wisest solution for the cooking problem. For example, an oil- or a gas-stove may be operated in conjunction with electric table devices, resulting in the very greatest cooking comfort. Whatever the special needs may be, there are fuels and stoves and combination possibilities to meet them all.

For kitchen refuse, any one of a number of white-enameled, sanitary containers, with lids operated by means of a foot-pedal, solve this part of the food problem. A unique garbage-box of paper, to be completely destroyed at the end of the day, is a recent innovation. The gas-incinerator and other practical refuse-destroyers suggest the trend of ultimate disposition where

this is not cared for by local municipal authority.

The small equipment consists of such utensils as are required for the preparation of food, dish-washing, and care of the kitchen. While many good lists of the small equipment of a kitchen have been made, there is no list complete or perfect for all conditions. Tools must satisfy not only the particular requirements of the household in which they are to be used, but the individuality of the one who is to use them. Utensils should number as few as possible, and be as good in quality and as light in weight as is consistent with the purpose for which they are intended.

Before purchasing any utensil always ask: Do I need this particular tool? While nothing should be lacking to make kitchen-work go easily, quickly, and well, yet every tool or utensil that one can do without is just one less to find a place for and keep clean. Although a utensil may be purchased specifically to save labor, every article brought into the kitchen, in itself, increases labor. Before buying any tool, therefore, let us be very sure that it will serve us more than it will work us.

Having concluded that it is needed, check it next for its value:

Is it fitted for the work required?

In size.
Material.
Shape.
Construction.
Will it save labor as claimed?

Is it a good investment?

As to first cost.
As to wearing qualities.
As to maintenance cost.
As to time and energy it will save.
As to the pleasure it may give.

The properly selected tool will be neither too large nor too small for its purpose; it will be sound in construction, with no complicated parts to get out of order or require unnecessary care; the material will be the most desirable for the use to which the tool is to be put, and will not in any way injuriously affect the food with which it comes in contact; it will not be awkward to handle; it will give one pleasure to look at it; it will bring a just return in labor saved or other profit for the investment, and the price will be fair for the quality offered.

The sanitary, well-arranged kitchen will require very little special cleaning, other than that covered by the normal, every-day care. Where

sanitary conditions exist, whatever cleaning is necessary can be accomplished with very little effort. If, in fact, the kitchen is that ideal place about which we have been dreaming and for which, too, many of us have been working, then cleaning up in the kitchen really resolves itself into—well—almost fun!

LET US MAKE OF OUR HOMES A PLACE WHERE THE FAIRIES SHALL LOVE TO COME AND DANCE AMONG THE PITCHERS AND THE TEA-POTS

REFERENCES:

For further practical details and helpful suggestions in planning and equipping a labor-saving kitchen, see:

"Planning the Home Kitchen," Helen Binkerd Young, Cornell Reading Course, Cornell University, Ithaca, N. Y.

"Planning and Equipping the Kitchen," Home Economics Bulletin, Iowa State College, Ames, Iowa.

The New Housekeeping, Christine Frederick.

The Efficient Kitchen, Georgie Boynton Child.

"The Farm Kitchen as a Work Shop," Anna Barrows, Farmers' Bulletin 607, United States Department of Agriculture, Washington, D. C.

"Household Engineering, Good Housekeeping Institute," *Good Housekeeping Magazine*, 119 West Fortieth Street, New York, N. Y.

Journal of Home Economics, American Home Economics Association, Baltimore, Md.

NOTE.—In addition to the valuable food and home-making articles, this publication contains, from time to time, interesting and practical articles on kitchen arrangement and equipment.

See, also, References listed at close of Chapter III.

XII

JUST THOUGHTS

AVING food for the country is not always saving money for the home, and there are moments when it takes the finest courage and the sanest judgment to strike a wise balance between the two.

Both in arranging the menus, in Chapter VI, and in selecting the recipes given in Chapter IX, it was not always easy—although the effort was made—to consider, equally, the food needs of the world, the easiest and most attractive way in housekeeping, and what might be best from a purely dietetic or health standpoint. In cases, it is sometimes necessary to sacrifice one ideal for another. Just which must stand and which must go can only be definitely decided by the individual housekeeper according to the most urgent need of the moment.

The Food Administration has made the following general "war-time" ruling in reference to cooking, and recipes approved by the administra-

tion must conform to this standard during our period of emergency:

To use no butter in cooking, but to substitute drippings, vegetable oils, nut butters, or "butter substitutes."

To use small amounts of fat only in cooking, and not to fry in deep fat.

To use all pork products sparingly.

To use cream sparingly.

To use sugar sparingly, substituting honey or syrup when practical.

Not to use toast as a garnish, or to serve foods on toast.

To use wheat substitutes—other flours and cereals—for part of the wheat flour normally used, and to use all wheat products sparingly.

While these rulings may change as the food needs of the world change, it would be well if some of these restrictions were more consistently observed at all times than they have been. Fried foods, pastry, except on rare occasions, and all dishes containing large quantities of sugar and fat are extravagant and seldom wholesome; a variety of flours and cereals is always best, while pork, from a purely hygienic standpoint, should be used with discretion.

In selecting the recipes in Chapter IX, as a matter of principle and as far as practical these rulings have been observed. It may be necessary, however, to adapt the recipes to the changing food needs of the world as these develop, and it is urged that, at all times, they should be used with judgment and checked with current requests of the Food Administration. It will be necessary to watch carefully, very probably, the kind of flours most desirable to use, and the quantities of sugar and fat available; the use of cream is frequently a matter that can only be determined by local supply.

TABLE OF NORMAL WEIGHT FOR MEN[1]

AGES	15–24	25–29	30–34	35–39	40–44	45–49	50–54	55–59	60–64	65–69
5 ft. 1 in.	122	126	129	131	134	136	136	136	134	
5 ft. 2 in.	124	128	131	133	136	138	138	138	137	
5 ft. 3 in.	127	131	134	136	139	141	141	141	140	140
5 ft. 4 in.	131	135	138	140	143	144	145	145	144	143
5 ft. 5 in.	134	138	141	143	146	147	149	149	148	147
5 ft. 6 in.	138	142	145	147	150	151	153	153	153	151
5 ft. 7 in.	142	147	150	152	155	156	158	158	158	156
5 ft. 8 in.	146	151	154	157	160	161	163	163	163	162
5 ft. 9 in.	150	155	159	162	165	166	167	168	168	168
5 ft. 10 in.	154	159	164	167	170	171	172	173	174	174
5 ft. 11 in.	159	164	169	173	175	177	177	178	180	180
6 ft.	165	170	175	179	180	183	182	183	185	185

TABLE OF NORMAL WEIGHT FOR WOMEN[1]

AGES	15–19	20–24	25–29	30–34	35–39	40–44	45–49	50–54	55–59	60–64
5 ft. 0 in.	113	114	117	119	122	125	128	130	131	129
5 ft. 1 in.	115	116	118	121	124	128	131	133	134	132
5 ft. 2 in.	117	118	120	123	127	132	134	137	137	136
5 ft. 3 in.	120	122	124	127	131	135	138	141	141	140
5 ft. 4 in.	123	125	127	130	134	138	142	145	145	144
5 ft. 5 in.	125	128	131	135	139	143	147	149	149	148
5 ft. 6 in.	128	132	135	137	143	147	151	153	153	152
5 ft. 7 in.	132	135	139	143	147	150	154	157	156	155
5 ft. 8 in.	136	140	143	147	151	155	158	161	161	160
5 ft. 9 in.	140	144	147	151	155	159	163	166	166	165
5 ft. 10 in.	144	147	151	155	159	163	167	170	170	169

[1] From Symonds's Table.

For table showing average weight and height of children, according to age, see:
William Tibbles, *Food in Health and Disease*, chap. iv, p. 27.
Mary Swartz Rose, *Feeding the Family*, Appendix, pp. 431–433.

HOW TO FIND THE CALORIE VALUE OF A RECIPE

The calorie value of a recipe may be very simply and approximately estimated as follows:

1. Determine number of calories in one pound, or other given quantity, of each ingredient called for in the recipe.[1]

2. Determine number of calories in that portion of each ingredient represented in the recipe, and add these figures.

Example:

CUP CUSTARD

Ingredients

1 quart milk	½ cupful sugar
5 eggs	Salt; flavoring

1. 1 pint of milk . . . = 325 calories
   1 egg . . . . . = 75 calories
   1 pound of sugar = 1,860 calories

2. 1 quart milk . . = 2 × 325 calories = 650 calories
   5 eggs . . . . . = 5 × 75 calories = 375 calories
   ½ cupful sugar = ¼ × 1,860 calories = 465 calories
   (Salt and flavor do not count.)

   Total = 1,490 calories

1,490 = calorie value of recipe.

Divided into six equal portions, each portion would contain, approximately, 250 calories.

[1] See "American Food Materials," Bulletin 28, United States Department of Agriculture.
Also, Rose, *Feeding the Family*, Appendix, specifically pp. 349–354.

With a little practice one can learn very quickly just how many calories are represented in one egg, one tablespoonful sugar, one cupful flour, etc., and it will not be necessary to refer to a book or table each time the fuel or calorie value of a recipe is to be determined.

By further analyzing the ingredients it is possible to estimate how many of the total number of calories are carbohydrate calories, how many are fat calories, and how many are protein calories. Those interested will find clear directions in *A Laboratory Handbook for Dietetics*, by Mary Swartz Rose.

For tables giving "100 Calorie Portions" of our usual or common foods, see Fisher and Fisk, *How to Live*, pages 170–190; also, Rose, *Feeding the Family*, Appendix.

ABOUT THE COST OF MILK

"In deciding whether any food is high or low in price, we must ask not merely how much we must pay for a pound or a quart, but how great is the return in actual food value. . . . In buying milk at 12 cents a quart one gets protein as cheaply as in meat at 25 cents a pound, or eggs at 35 cents a dozen, or fresh cod at 20 cents a pound; and one gets energy more cheaply than from any of these other materials. Even at 18 cents, a quart of milk would be almost as cheap a source of protein and a cheaper source of energy than meat at 35 cents a pound, it would be a cheaper source of both protein and energy than eggs at 60 cents a dozen. Because of these facts dietitians advise families who must make every penny count to cut down on their meat before they do on their milk."
—LAFAYETTE B. MENDEL.

"Doctor Mendel does not wish to be understood as saying that milk is the cheapest source of energy. Cereal foods such as wheat, corn, oats, and rice hold that distinction. But they lack lime and other nutritious substances which milk contains. 'Milk and cereals together,' says Doctor Mendel, 'make a remarkable combination; "bread-and-milk" is justified not only by experience, but by theory.'"—United States Food Administration.

LABOR-SAVING DEVICES VERSUS "HIRED HELP"

"The labor-saving devices in America are aids to a new domesticity which will gradually do away with the servant question as it exists." —Mrs. Havelock Ellis.

"The amount of time required for housework is affected to a considerable degree by the tools with which the work is done; in other words, by the extent to which labor-saving devices are used."—John B. Leeds, M.A.

A fair annual budget allowance for household service, as estimated for an average family with an income of $3,000 is $130, in addition to the time and labor given to household work by the housekeeper.[1] The following chart suggests how this $130 might be spent in securing help by means of labor-saving devices rather than through "hired help."

[1] *Cf.* Ellen H. Richards, *The Cost of Living.*
Also, Benjamin R. Andrews, Ph.D., *A Survey of Your Household Finances.*
Also, John B. Leeds, M.A., *The Household Budget.*

		First Year	Second Year	Third Year
Cooking		Improved Range $ 60.00 Cabinet Table.. 35.00 Small Equipment 17.00 Steam Cooker... 8.00	Bread-mixer....$ 2.50 Meat Grinder, or Small Utensils. 3.20 Sanitary Garbage Can..... 3.00	Electric Table—Cooking Devices, $15.00 Wheel-tray..... 12.00 Sanitary Refrigerator..... 50.00 Electric Dishwasher..... 40.00 Small Utensils... 5.00
Cleaning	Cleaning-woman, 1 day per month at $2.00 equals, per year.....$ 25.00 Without food, damage, uncertainty costs.		Vacuum Cleaner.$ 42.00 Polish Mop..... 1.50	
Laundry	Laundress, 1 day per week at $2.00 equals per year.....$105.00 Without food, etc.		Washing-Machine.....$ 65.00 Electric Iron.... 5.00	
		$120.00	$122.20	$122.00
		Interest..... 8.00	Interest..... 7.80	Interest..... 8.00
	Total.....$130.00	$128.00	$130.00	$130.00

NOTE.—Reliable, good quality labor-saving equipment, with proper care, should serve a household three years or considerably over; it may therefore be counted as a permanent investment. An annual allowance of one hundred and thirty dollars for "help," intelligently financed, can ultimately secure a very complete labor-saving outfit for the home. Where this money is not all available in one sum on the first day of the new business year you will be quite justified in borrowing from your bank or from your own bank account, to finance the new equipment, for the schedule provides for 6-per-cent. interest on such a sum.

Equipment chosen will necessarily depend largely on local conditions, available fuel-supply, special family needs, floor space in home, and personal preference; definite equipment offered is suggestive only; other combinations, equally good, may be easily secured for the same outlay.

HOT WEATHER COOKING SUGGESTIONS

Not the Least of the Summer Problems Is the Overheated Kitchen

WHAT YOU CAN DO TO KEEP YOUR KITCHEN COOL

Work before 9 A.M. and after 9 P.M.
Cook out of doors or on the porch.
Do the canning and preserving out of doors.
Use ready-to-eat and quickly prepared foods.
Use a fireless cooker or fireless-oven range.
Use a chafing-dish at the table.
Adopt the electric breakfast.
Go out to dinner with a picnic basket.
Serve sandwich suppers on the porch.
Make frozen desserts instead of baked puddings.
Use an electric fan in the kitchen.
Do no cooking on Sundays and holidays.

A definite sum of money for kitchen convenience and the saving of labor should be a legitimate part of the outlay belonging to any vacation which includes housekeeping.

KITCHEN SCHEDULE FOR THE WARM MONTHS

As living requirements and working conditions differ in every home, no very definite, practical schedule can be arranged that might be carried out in all cases. The following outline may offer some suggestions, however, for simplifying the hot-weather cooking, and keeping a cool and attractive kitchen.

BEFORE 9 A.M.

General preparation, as far as possible, of all food required for the day:

Meat and vegetables: These, each separately or combined as a stew or braised dish, may be prepared and put into fireless cooker or oven of automatic range.

Salad: Greens can be cleaned and put into a cheese-cloth bag or wire basket on ice; salad dressing may be made and put away.

Bread, rolls, cake: These may be baked, if needed; small pans, rolls, and cookies save oven heat.

Desserts: Fruit may be cleaned, or fruit cocktails prepared and placed in refrigerator. Custard may be made, or syrup prepared for a frozen dish. Mousse, for the dinner dessert, may be prepared and packed away in the fireless cooker.

Other preparation: Syrup may be made for cold drinks and put in refrigerator. Sandwiches may be made for lunch or supper, tied in a damp cloth, and put in refrigerator. A picnic lunch may be packed.

Leave the kitchen in order for the day.

AFTER 9 P.M.

Plan meals for next day:

Cereal for breakfast may be prepared and put in fireless cooker; or,

Vegetables to be used next day for a vegetable salad, or cream soup, may be cooked overnight in fireless cooker; or,

Beans for soup or stew, which have been soaking all day, may be cooked overnight in fireless cooker; or,

Meat to be used as "cold meat" may be cooked overnight in fireless cooker; or,

Fruits for "stewed fruit" may be cooked overnight in fireless cooker; or,

Bread or rolls may be mixed in bread-mixer, to be ready for early baking.

Leave kitchen in order for next day.

WHAT A CENT'S WORTH OF ELECTRICITY WILL DO FOR YOU

ESTIMATED APPROXIMATELY WITH CURRENT AT FIVE CENTS PER KILOWATT-HOUR

It will operate a 12-inch fan for 4 hours.

It will bring to a boil 2 quarts of water.

It will make from 4 to 7 cups of coffee in a percolator.

It will bake a pan of biscuit, or cook a steak, on a "table-stove."

It will make a Welsh rarebit in a chafing-dish.

It will operate a table toaster for 25 minutes.

It will operate an electric griddle for 20 minutes.

It will operate an 8-inch sauté pan for 20 minutes.

It will warm the baby's milk in a milk-warmer for 6 feedings.

It will keep a 6-pound flat-iron hot for 20 minutes.

It will run the sewing-machine, or help with the washing, dish-washing, cleaning, ice-cream freezing, or other work for 3 hours.

PUT YOUR KITCHEN ON A WAR FOOTING

1. Determine type of meals fitted to needs of your family, and, in general, amount of food required. See that each class of food is represented, with good cooking, attractive service, and some "flavor" or "color" to give relish.

2. Calculate cost of food in relation to market prices, nourishment obtained, digestibility, and time for preparation. Learn how to substitute one food for another; fruit in place of a green vegetable; bread in place of potatoes; cheese in place of meat, etc.

3. Serve as much variety as possible; not necessarily at one meal, but in the course of a day or week. In this way—and excepting definite over- or under-feeding—the proper balance of the needed elements will be more or less automatically supplied. Approximately, this averages: *protein, 12 per cent.; fat, 18 per cent.; carbohydrate, 68 per cent.; mineral matter, 2 per cent.*

4. Simplify menus and service. Few dishes at one meal, and varied meals—with enough in quantity to make up for lack in variety—is a good rule; "picnics" save work and give pleasure; "combination" dishes are helpful and cheap.

5. Do not serve more than is needed or will be eaten; do not throw food away; do not be ashamed to be careful.

6. Plan meals in advance; do your own marketing; accept only reliable packaged foods; try new foods; pay cash.

KEEP UP TO DATE

Remember that valuable food and household information may always be obtained through the State Agricultural Colleges, or through the Office of Information, or the Office of Home Economics, the United States Department of Agriculture, Washington, D. C., or from the United States Food Administration. Watch for new bulletins as they may be announced. Specialists of recognized authority prepare these bulletins, and the information they contain is free for the asking, or for a very nominal sum only. Special bulletins containing series of lessons for clubs and neighborhood work are also available.

THE END